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Coordinating The SouthEast

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REPEATER JOURNAL

NATIONAL AWARD WINNER

The Voice of the SouthEastern Repeater Assn., Inc

Published 4 times a Year by SERA, Inc.

May, Jun., Jul., 1993

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FOR LOCAL ASSISTANCE

Repeater owners and users are urged to contact local state SERA Directors/Vice Directors for assistance, information, coordination or other needs as required. Please call within reasonable hours and allow reasonable time for action! Remember SERA Officers work for you VOLUNTARILY. They receive NO Pay except for postage and telephone refunds!!

Editorial Comment

Digital on 2M FM Simplex

Our last editorial dealt with complaints of many FM voice operators who said they were being run off of simplex frequencies in the voice portion of the band by digital signals.

The Journal hadn't been out a few days before I started hearing complaints from the Digital people, mainly from the Greensboro and Raleigh area. In Greensboro my name, SERA and the editorial was mentioned quite a few times, amid complaints. From Raleigh, The Raleigh Amateur Radio Society, (RARS) a club of over 400 responded with a letter to the Directors of SERA, voiceing their disapproval of what I said. The CDCC, a Digital coordinating group in central North Carolina has also spoken out in strong language about my editorial.

One group asked if this was SERAs stand. I cannot say for sure whether or not it is. It has not been discussed with the SERA Board. The editorial words were mine, and reflected the feelings of the Editor and Publisher of the Repeater Journal. I stand behind my statements of last issue. I think a lot of the complaints were a result of taking out of context what I was trying to convey. Apparently many read the first few paragraphs, got mad, and threw the book away.

The SERA Board was given a study by Wally Burkette, WA4KXV, Virginia Director at the last meeting. The study recommended at least 12, possibly more simplex digital assignments in the 2M band. The Board felt more study was needed and the proposal was tabled until the next meeting. I hope more frequencies for digital will help ease some of the problem.

A story in this issue about the CDCC meeting in Raleigh says in part: "A strong complaint at the meeting was that SERA has unilaterally allocated frequencies for voice and packet, meanwhile maintaining they are a repeater group with no fundamental interest in packet." "The packet operators felt disenfranchised and believe a cohesive organization was needed to speak for their interests."

This is not a totally accurate statement. SERA has strong ties with ALL Amateur interests in the VHF/UHF portion of the spectrum. The Repeater Journal gives considerable space for digital stories and news every issue. In fact, we felt committed to print in this issue a story which has several negative statements toward SERA.

As I have mentioned quite a few times over the years, SERA is in the Repeater Coordinating and Band planning business. It would be impossible for our organization to step in now and try to coordinate digital operations. Years ago when digital was getting started, spokespersons for packet came to our board meeting and told us, "No problem with packet, it's such a unique mode, there will never be any problems of crowding like you have on voice." "We estimate you can put 500 people on one simplex frequency and it will work, due to the nature of packet, coordination is totally unnecessary." I guess the SERA Board, at the time, being

Continued on Page 62

REPEATER JOURNAL

May, Jun., Jul., 1993
Volume 22, No. 2
ORGANIZED IN 1971
"Into Our 22nd Year"

The Voice of the SouthEastern Repeater Assn., Inc

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About SERA Associate Membership (Repeater Users)

Amateurs, especially repeater users, are invited to join SERA as Associate Members. Only $8.00 per year will enable Amateurs to support the organization and receive the ***Repeater Journal.*** Associate Membership deadlines are the 15th of the month preceding months of publication -- Jan. 15, April 15, July 15 and October 15. Persons joining or renewing their membership must have their application into the Tobaccoville Post Office Box by these deadlines to receive the next upcoming ***Repeater Journal***, published the first week of February, May, August and November. Memberships received after any deadline will not receive next to-be-published ***Repeater Journal***, but instead will receive the forthcoming issue the following quarter. HOT-P Associate Memberships (***Repeater Journals*** mailed 1st Class rate) are limited to one year memberships at $14.25 per year. Regular membership ***Repeater Journals*** are mailed 3rd Class Bulk Mail. SERA does not issue receipts for Membership applications, nor are Journals forwarded to new addresses. If you move, we must be notified. Members should wait until next ***Repeater Journal*** comes out to report any problems. Write SERA Associate Membership, P.O. Box 215, Tobaccoville, N.C. 27050-0215. Associate Members may hold appointive offices and positions within the SouthEastern Repeater Association, Inc.

About SERA Full Repeater Membership (Repeater Owners)

Officers and Directors are elected from Repeater respresentatives who are SERA Full Members. Any repeater owner or club may join SERA as a Full Member if they have an operable repeater on the air. Full Membership application, coordination information (if not on file) and $20.00 should be submitted for the annual Full Membership fee. Two Full Members, named and listed on the application by the owner, receive the ***Repeater Journal*** from each application. The Full Member repeater is also appropriately recognized as a SERA supporter in the repeater index with a asterisk (*) code. All Full Memberships expire on December 31 of each year. Write SERA Membership, P.O. Box 215, Tobaccoville, N.C. 27050-0215.

About the SERA Repeater Journal

The SERA ***Repeater Journal*** is published quarterly, the first week of the months of February, May, August and November of each year and mailed free to members of SouthEastern Repeater Association, an eight state repeater coordinating organization made up of repeater owners and users. Permission is granted for use of material other than repeater indexes contained in the ***Repeater Journal.*** (See Important Note this page) provided proper credit is given. The ***Repeater Journal*** Editor will swap newsletters with other Repeater Councils, News organizations and clubs upon written request. DEADLINES: Ad space reservations are the 20th of the month, and ad copy due the 1st of the next month, ONE month prior to publication. News deadlines are the first of the month prior to publication month. ***The Repeater Journal*** is entered as Third Class Mail at the Post Office in Greensboro, N.C. The ***Repeater Journal*** newstand cover price is $2.50 and is available from numerous retail Amateur Dealers in the surrounding 8-state area. (See list elsewhere this issue). All news and Newsletter exchanges should be mailed to the Editor: Wayne C. Williams K4MOB, 600 Lakedale Road, Colfax, N.C. 27235.

About the SouthEastern Repeater Association, Inc.

SERA, SouthEastern Repeater Association, Inc. is one of the largest, most well known non-profit Repeater Coordinating Copuncils in the United States. SERA territory covers over 1,700 repeaters in member States of North Carolina, South Carolina, Virginia, Tennessee, West Virginia, Kentucky, Georgia and Mississippi. SERA celebrates its 22nd anniversary in 1993 with a continuing goal - to serve the repeater owners and users of the Southeast by providing a voice of communications, information and education with the publication of ***The Repeater Journal***, and the guidance of our State (Director) Coordinators, officers and volunteers. Your support, comments and reccomendations are appreciated.

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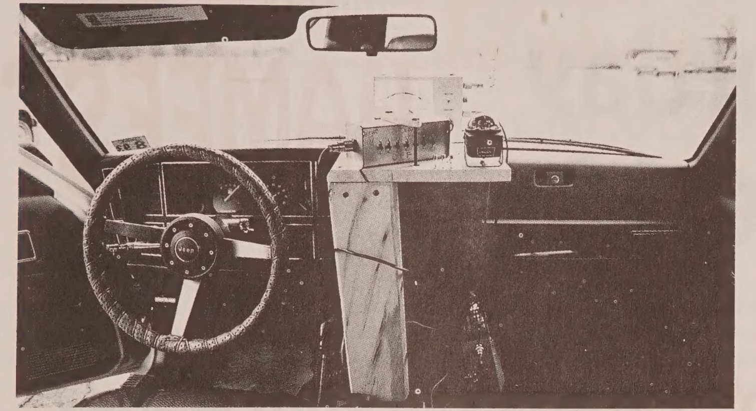
Fox Hunting in Guilford County

And They Said This Would Be Easy!



Inside Roger Duncan's/NN4P official FCC (Fox Chase Crew) vehicle. (Photo by Steve W3GRG)

Journal Cover Story

Our Cover story features "Fox Hunting! We are pleased to have stories from several individuals who have conducted or participated in these events.

The Repoeater Journal Cover Photo features Lesa Layno, KD4ANI and Kathy Flanyak, KQ4GW as they close in on the fox. Cover color slide by Steve Mosier, W3GRG.

-by Roy Smith, N4BYU

On January 16, we had a little fox hunt in Guilford County. I got to the transmitter site about 30 minutes early to set up. Gene, KQ4AV, and I had already checked the location out and made sure the transmitter signal could be heard at the starting point, Carolina Circle Mall. Mike and Monica Sandage, WA4ZYF and KD4DMI, were already at the Mall registering the hunters and recording vehicle mileage.

NN4P gets his first bearing on the fox. (Photo by Steve Mosier, W3GRG)

Joe, WB2HOL, had provided us with an old ammo box containing a half-watt 2-meter transmitter with a CW IDer and a small 5-watt amplifier.

This would sit in the crotch of a tree. As I was pulling the home made ground plane antenna into the tree, the center conductor of the coax broke at the connector. I had a small butane solder gun but the butane was cold and I couldn't get it lit at first, and then when I did I couldn't get the connector hot enough to melt the solder. Luckily, I had a backup antenna, a small J-pole made from TV twin lead. I pulled it up in the tree and called Mike and Monica to see if they could copy. Of course they couldn't!!!

I had thought the location would be very easy to find, since there are no big buildings around to block the signal. As it turned out, this was a very low area and the signal seemed to go everywhere but where you wanted it. Those at the starting point who could hear it immediately headed off in the wrong direction.

I decided that since most folks couldn't hear the signal at the starting point, I would just transmit from my mobile rig for one minute every 5 minutes in order to get the hunters into the right ballpark. Have you ever sat in your car on a cold day and looked at your watch for three hours?

Then, after about 45 minutes, the hidden transmitter quit. After tinkering with it for awhile, I got it to put out a dead carrier, but with no ID. And they said this would be easy!

Well, it turned out to be good hunt in spite of everything. Tom Clark, KA4OVZ, and Bob Dalton, AB4ZD, had come down from Burlington with their fox van to win this thing. And win it they did, in about an hour.

But the real surprise was John Taylor, KD4VGQ. John had received his new ticket on Monday and showed up for the foxhunt on the following Sunday with only his handheld. No DFing equipment, no antennas, just the handheld. And he came in SECOND! Just 16 minutes behind the high-tech winners. Just goes to show you that there's always someone who can teach the pros a new trick.

John Taylor, KD4VGQ, finds the fox. (Photo by Steve Mosier, W3GRG)

Rays Amateur Electronics

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_____Indoor Fleamarket Tables @ $10.00 each __________

_____Outside Tailgating @ $3.00 each vehicle __________

_____RV Parking or Hookup @ $10.00 / night __________

TOTAL ENCLOSED __________

Make checks payable to
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Mail along with SASE to:

Winston-Salem Hamfest
PO Box 11361
Winston-Salem, NC 27116

Pre-registrations without SASE or received after May 25 will be held at the gate.

9 AM - 5 PM at the

Lawrence Joel Veterans Memorial Coliseum Annex!

Tailgating area opens 6:00 AM. Dealer and indoor fleamarket opens to the public 9:00 AM.

ADMISSION

$6.00 in advance, $7.00 at the door. Admission includes FREE PARKING. Children under 10 FREE. Tailgate area: $3.00 per vehicle plus admission. Indoor fleamarket tables $10.00 each. Admission before 9 AM to the indoor fleamarket requires both a ticket and an indoor table assignment. RV parking/hookups are very nearby and are $10.00 per night (ADVANCE REGISTRATION REQUIRED). Child care will be available 9 AM - noon and 1 - 5 PM. Costs will be $1.00 per hour per child.

FEATURES

Unloading/reloading: Indoor vendors and fleamarketeers register with our dock supervisor upon arrival. Your equipment will be quickly and carefully moved to your tables for you. At the end of the day, we will arrange a time for our people to assist you with reloading. This is a service for which the WS Hamfest has become famous! And FOOD! This year we are making arrangements to have some of your favorite restaraunts on site!

LODGING

The official hotel for Hamfest '93 is Comfort Inn, 3111 University Parkway, Winston-Salem, NC 27105, 919-727-1277. The Comfort Inn has a special Hamfest rate of $49.28 (incl. tax) for up to 4 persons in room. Other choices nearby are Best Western 919-723-2911, Hampton Inn 919-767-9009, Holiday Inn North 919-723-2911 and Sheraton Inn 919-767-9595. Make your reservations early, there is another major convention in Winston-Salem the same weekend.

DIRECTIONS

Talk in: **146.64**(-600) primary & 145.47 (-600) standby. **From I-40** or Business 40 take **US 52 North.** Approximately 3 miles turn left (west) on **Akron Dr.** Two stoplights then turn left again on **Reynold's Blvd.** Cross Indianna Ave. Then turn left on **Shorefair Dr.** Turn right next intersection on **Deacon Blvd.** Hamfest 0.5 mi. on left. **From US 52 South:** take **University Parkway South** 4.1 miles to **Deacon Blvd.** Turn left, Hamfest is 0.3 mi on right.

DEALERS

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and certificates to:

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SERA Full Member Repeaters Total 969!

We're Gonna Reach 1,000 in 93

■ 7 of 8 States exceed 1992 Total Full Membership.

-by Wayne C. Williams, K4MOB

When I work out the figures on Full Membership, I get excited. Repeater owners in the SERA 8 states continue to respond and support our organization at new record levels each quarter.

The second quarter of 1993 is no exception. We stand at 969 Full Member repeaters, a new all-time record.

For two years I have been hoping to see us break that 1,000 magic mark. In 1993 we will do it!!!

Why We Need Your Support

Our repeater owners and sponsors are responding in a magnificant way. NO WHERE in the United States is there such support for a coordination organization, especially when membership is strictly voluntary.

SERA - SouthEastern Repeater Assn. Full Membership

By State - By Year - From 1984 to Present

SERA DIST	TTL '84	TTL '85	TTL '86	TTL '87	TTL '88	TTL '89	TTL '90	TTL '91	TTL '92	CURR '93	1993 Mbr%	STATE RPTRS
NC	83	149	147	123	145	181	157	189	220	234	74.5%	314
SC	35	56	43	44	46	59	50	53	60	64	54.7%	117
VA(1)	58	92	88	98	99	151	122	127	136	144	66.7%	216
WV	21	41	40	51	39	51	54	67	70	61	58.6%	104
TN	58	85	63	80	80	111	128	155	179	172	48.2%	357
GA(2)	18	109	125	110	100	104	124	142	173	182	56.0%	325
KY(3)	4	18	21	19	15	48	53	66	70	71	41.8%	170
MS(4)	--	--	--	--	3	12	36	38	36	41	32.0%	128
TTLS	279	550	527	525	527	717	724	837	944	969	56.0%	1731

(1) Total Virginia list does not include 86 repeaters in T-MARC Territory, (N of Highway 33 and Latitude 38-degrees North, and In the West Virginia Panhandle area.

(2) Georgia assumed SERA District Status in mid 1985.

(3) EKY assumed SERA District in 1985, W. Ky in late 1989. District renamed Kentucky District.

(4) Mississippi assumed SERA District status in late 1989.

Updated as of 4-19-93

This is as it should be. It takes money to run an efficient coordination organization. Membership money is the only source. Our repeater owners and operators are contributing their share to help SERA continue the job expected in coordination and continued trouble-free frequencies.

We have seen great growth in the looks and quality of the Repeater Journal over the past two years. The overall organization likewise has upgraded and improved - which in turn improves the performance of our coordinators. We have upgraded our computer systems, software re-written, data bases expanded, and tools, information flow, and training is more readily available to our Directors and Vice-Directors. All this has been possible with money - the money we received from voluntary Membership.

Now To The Charts!

North Carolina has set a new all-time record for total number as Full Members repeaters in any one State with 234. This represents 74.5% of all the repeaters in the State. Again, the tarheel state leads in overall members, and in membership percentage.

Second in repeater members is Georgia with 182 or 56% (fourth in percentage). This is an all-time high for Georgia, and second highest on record of any State.

Tennessee is third in total number of members with 172 or 48.2% of their 357 repeaters.

Fourth in repeater members is Virginia with 144 for 66.7%. They rank 2nd in overall percentage.

West Virginia ranks 3rd in repeater member percentage with 58.6% or 61 of their 104 repeaters as members.

South Carolina is a close 54.7% with 64 of their 117 repeaters joined.

Kentucky has 71 members for 41.8%, their highest ever. Mississippi is moving with 41 members or 32%.

Overall SERA boasts 56% total voluntary membership across 8 states. This is 969 of 1731 repeaters who have joined.

If you are a repeater owner, and would like to renew, or join as a Full Member of SERA, please use the short-form application on page 37. The fee is $10.00 for the remainder of 1993 calendar year. Two representatives will receive the Repeater Journal, and the repeater will be listed in the index as a SERA supporter with an asterisk beside the listing. Non-Member repeaters have an "N" beside their listing.

If you are a repeater user, and you notice your club's repeater is not a SERA member - bring it up at the next meeting - ask them why?

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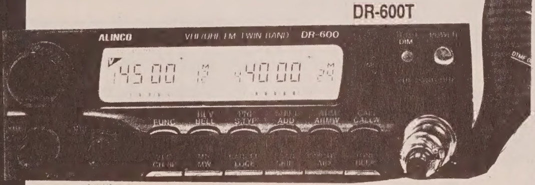

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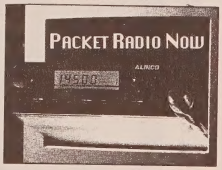

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SOUTH CAROLINA NEWS

-by Gary, WD8OXE & Donna, KB4TUY Foster

Send news and correspondance to: 670 Foster Road, Inman, SC 29349

As summer approaches we have been very busy fixing up and preparing to build on to a house built in 1866. By the next journal we hope to be moved in. Of course, included in the plans are the ultimate Ham Shack. Our only reservation is having to move the tower and clean out 15 years of junk out of the attic!

This all brings us to the point that the only news we have had time to gather this time came by way of news letters. We hope to make a trip around the state in the near future and be able to possibly talk meet or talk to you on the way. We apologize if our responses have been slow and hopefully we will get settled in soon and things will get back to normal.

There have been several new repeaters coordinated in the last few months and we hope to have a report on them as soon as they are placed on the air.

440 is the band on the move in S.C. so we now have a new Dual bander to keep better informed on whats going on.

MYRTLE BEACH

Raffle Update: The Grand Strand ARC Raffle netted the club $800.00 with the proceeds going towards the Myrtle Beach Hamfest. Frank Chinery, N4WZV made a clean sweep by winning the Grand Prize a 25" Color T.V., the Door Prize, a SWR Meter, and a Kenwood TS-140 HF Rig for selling the winning ticket. And we bet he's never won anything in his life! Web, KD4CQK has taken over as the newsletter editor while Brad, WA4YBD builds his new house. Webs' packet address is: KD4CQK@N4XML. MYB.SC.USA.NA.

ANDERSON

New Location for Lake Hartwell Hamfest, to be held May 21, 22 & 23 at the Sadlers Creek State Park off Hwy. 187. Please take note that this is a new location with much more room.

A new slate of Officers have been elected to serve for 1993 for the Anderson Radio Club. They are: President; Jerry Lambert, N4BAO; Vice President Cecil Foxworth, KA4OVN; Secretary Walt Sanders, W4ZJI; Treasurer Joe McAbee, KD4CKS; Activities Coordinator Bob Carey KK4SO; Newsletter Editor Jerry Garrett, W4FVV. Club meetings are held the 4th Thursday of each month at 7:30 p.m. at the Anderson County EOC. Club Repeaters are 146.79 and 146.97.

FLORENCE

The 146.88 repeater was taken down for two weeks for a tune up. Due to low output a new exciter board has been ordered. When the repeater is back up to 100% a new controller is planned with remote receivers. The new 220 repeater is doing a great job with no problems reported.

Update on Mt.top BBS

The N4HWU-2 BBS on 145.67 located on Tryon Peak is working very well. The activity is on a steady increase with the converse mode becoming more and more popular. Sysop and forwarding is being done on 440 so not to tie up 145.67. A new TriBand antenna has been ordered and will be in place shortly to increase coverage. Sysops are; KI4FL, N4HWU, AA4CA, and WD8OXE.

* * * * *

The Blue Ridge Amateur Radio Society has installed a Rose Switch and is presently testing on 145.05. We will have more later on the operation and coverage.

* * * * *

KI4FL ON 220 The KI4FL BBS and fowarding system has added 220 packet to the system. The 220 radio has made fowarding much quicker than 145.01. Jim provides much of the fowarding for mid and upper S.C.

* * * * *

That's it for now - keep sending us news!

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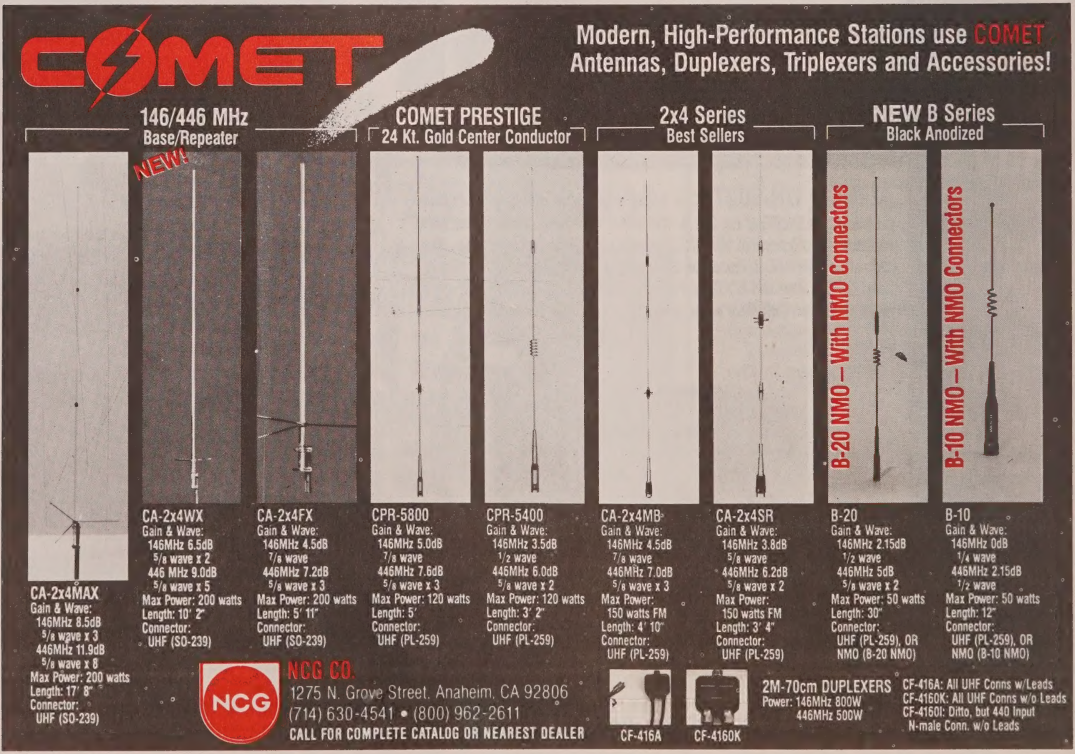

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446MHz 11.9dB
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Gain & Wave:
146MHz 6.5dB
5/8 wave x 2
446 MHz 9.0dB
5/8 wave x 5
Max Power: 200 watts
Length: 10' 2"
Connector:
UHF (SO-239)

CA-2x4FX
Gain & Wave:
146MHz 4.5dB
7/8 wave
446MHz 7.2dB
5/8 wave x 3
Max Power: 200 watts
Length: 5' 11"
Connector:
UHF (SO-239)

CPR-5800
Gain & Wave:
146MHz 5.0dB
7/8 wave
446MHz 7.6dB
5/8 wave x 3
Max Power: 120 watts
Length: 5'
Connector:
UHF (PL-259)

CPR-5400
Gain & Wave:
146MHz 3.5dB
1/2 wave
446MHz 6.0dB
5/8 wave x 2
Max Power: 120 watts
Length: 3' 2"
Connector:
UHF (PL-259)

CA-2x4MB
Gain & Wave:
146MHz 4.5dB
7/8 wave
446MHz 7.0dB
5/8 wave x 3
Max Power:
150 watts FM
Length: 4' 10"
Connector:
UHF (PL-259)

CA-2x4SR
Gain & Wave:
146MHz 3.8dB
5/8 wave
446MHz 6.2dB
5/8 wave x 2
Max Power:
150 watts FM
Length: 3' 4"
Connector:
UHF (PL-259)

B-20
Gain & Wave:
146MHz 2.15dB
1/2 wave
446MHz 5dB
5/8 wave x 2
Max Power: 50 watts
Length: 30"
Connector:
UHF (PL-259), OR
NMO (B-20 NMO)

B-10
Gain & Wave:
146MHz 0dB
1/4 wave
446MHz 2.15dB
1/2 wave
Max Power: 50 watts
Length: 12"
Connector:
UHF (PL-259), OR
NMO (B-10 NMO)

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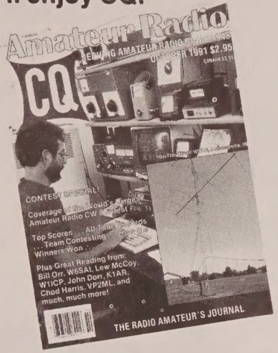

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Fox Hunting in Rockingham County

A Hunting We Will Go!

Journal Cover Story

-by Gail Overby, KB4JAA

- A HUNTING WE WILL GO! A HUNTING WE WILL GO
- WE'LL CATCH A FOX; PUT HIM IN A BOX; AND
- THEN WE'LL LET HIM GO!

A dozen vehicles rolled into the Rockingham Community College parking lot on a recent Saturday. This was the starting point of the Rockingham County Foxhunt in North Carolina. Howie Silver, KB2BBG, was on the scene to greet the eager foxhunters and check them in. Six teams, equipped with strange looking antennas, homemade attenuators, and 2m radios, participated in the hunt. Each team was required to list their name, call sign (if they had one), license plate number, and odometer reading -- since this was a time versus mileage hunt -- before they could enter the event. I was present, camera in hand, to capture the action. The competitors all posed, with antennas in hand, for a quick photo, and then everyone got together for a group photograph before departing.

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NN4P

Roger Duncan, NN4P and Terry Shelton, KC4YRH in their official FCC (Fox Chase Crew) vehicle. (Photo by Gail Overby,

The starting time for the hunt was 2:00 pm. With time to spare, the hungry foxhunters waited impatiently for the upcoming hour. They chatted idly among themselves, peering at their watches every so often. As the 2:00 hour drew closer, the competitors began moving to their vehicles, congregating around their radios, and grasping their antennas. Hurriedly, they examined their equipment, making one final check before "WB4EQF"-- The fox's first transmission was heard! The foxhunters listened intently to the signal, flipping switches and moving their antennas about. Satisfied and perhaps confident with

Continued on Next Page

Western Carolina Amateur *Radio Society/VEC, Inc.*

An Amateur Radio Volunteer Examiner Coordinator

VEC NOTICE

With the apparently imminent move of Novice testing into the VEC program, WCARS/VEC believes we must do our part to become more visible. We are particularly interested in seeing every Amateur Radio Club in America have at least one accredited VE team within its membership.

If you or your club are interested in forming a VE team, WCARS/VEC is ready to help. For information contact any of the WCARS/VEC persons below:

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(615) 688-7771

Norman Harrill, N4NH
7 Skylyn Court
Asheville, NC 28806
(704) 253-1192

John Chism, ND4N
206 Lanewood Drive
Greenville, SC 29607
(803) 297-1617

We're Looking for a Few Good VEs!

A Hunting We Will Go! The entire crowd of participants gather for photos before the hunt in Rockingham County begins. Men, women and children now participate. - Photo by Gail Overby, KB4JAA.

Jeff Law, KD4FMW, Tom Pennebaker, WB4EQF, Frank Divinie, KB4IHD, Walt Joyce, WA4IXW and Robert Willis, KA4FFT, tell war stories after the fox hunt is over with. -Photo by Gail Overby, KB4JAA.

A Hunting We Will Go

the readings they got, they jumped into their mobile units and scattered one by one out of the parking lot. They were off to find that fox!

Meanwhile, back at the fox's den...

The Sly Old Fox and his cohorts sat awaiting the arrival of the hunters. Every so often he would send his signal to let them know he was still out there and still waiting. Thirty minutes passed. 3:00 rolled around and still no sign of anyone. Then, long about 3:30, a rumble could be heard through the woods. Someone was sniffing out the first decoy! Seconds later the rumble moved closer. The second decoy had been found. The confused team stopped for a minute, calling out to the fox. Getting no response, they took the road to their right. Down the hill and into sight came the familiar rumble.

Dean Walker's red truck stopped abruptly, and two smiling foxhunters jumped out. Dean Walker, KB4KVS, and Butch Overby, WA4RDX, had found the fox! Roy Smith, N4BYU, and Gene Schmig, KQ4AV, were hot on the trail as well and not far behind. After checking out all three decoys, they made their way down the stretch and into the fox's den. They were the big winners of the day since they had travelled the least distance in their search for the fox!

Following in the winners' tracks were Jerry Bradmon, WA4QOI, and his two daughters, Steffany, KC4WBK

Roy Smith, N4BYU and Gene Schmig, KQ4AC ready for bear, err, fox. (Photo by Gail Overby, KB4JAA)

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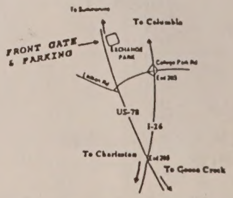

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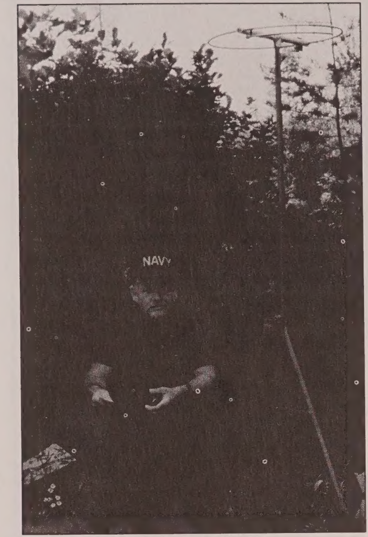

The Sly Old Fox: Tom Pennebaker, WB4EQF. (Photo by Gail Overby, KB4JAA)

and Jenny. They picked up the scent and fell into the den right behind the leaders.

More minutes went by before any of the other teams appeared. Suddenly, another vehicle was heard. It moved closer, then stopped. Silence. A hush fell over the cool crisp afternoon. Everything was quiet -- except -- listen! -- There was a rustling of leaves in the woods.

The sound was getting closer. Wait a minute. Where did it go? Then whirrr! Tap! Whirrr! Tap! What is that? Something caught our eye. down the road walked three weary, wandering foxhunters. Spying the Old Fox, Frank Divinie, KB4IHD, Walt Joyce, WA4IXW, and Jeff Law, KD4FMW grinned happily. They had left their vehicle and finished the hunt on foot.

There were still two teams left. The Old Fox was getting tired. His ole belly was beginning to growl. Hunger was starting to set in. His mouth was watering and he had worked up a thirst from his many transmissions throughout the day. The hour was getting late and still no one came. Finally, he called out to the two remaining teams. They would have ten minutes to find him before he declared the hunt over. Only one team responded to his call: they were going home. The other team was never heard from. Could something have captured them along the way? We may never know.

And with that the Sly Old Fox slipped deviously away.

Getting Started In Radio Direction Finding

-by Joe Leggio, WB2HOL

Have you been listening to other hams talk about their luck in finding a hidden transmitter? Are you interested in learning about VHF propagation? Do you enjoy experimenting with antennas? Do you want to develop skills useful in search-and-rescue operations? If you answered yes to any of these questions, then you might want to join in the fun and get ready for the next hidden transmitter hunt in your area.

Hidden transmitter hunts, for "foxhunts," are popular throughout the country. These are contests where hams match their radio direction finding (RDF) skills against those of others. The rules of the hunt vary. It may be the first person to find a hidden transmitter who wins, or the person who traveled the least distance. Teams are formed to share the tasks of driving, navigating, and operating the RDF equipment. You can join a team even if you don't have equipment of your own.

Most of the hunts I participate in use a combination of both time and mileage. This encourages the participants to take careful bearings of the transmitted signal and plot them on a map. Once bearings are plotted, the shortest route to the location where the bearings intersect is determined. As you get closer to the hidden transmitter the signal strength will increase. As you take additional bearings, you will find them converging on the location of the hidden transmitter. I use a hand-held compass away from the metal body of the car to take my bearings. They are far more accurate that way. I also use an attenuator to reduce the signal level to my receiver once I get close.

There are many devices which can be used to determine the bearing of a radio transmission, the simplest being some type of directional antenna to find the direction of the strongest signal. If you do not have a portable directional antenna it is possible to use your body to shield an HT from signals that are behind you. Simply hold the HT close to your body and pivot slowly. When your body is between the HT and the transmitter the signal will be weakest. If the signal is very strong, you may wrap the HT in aluminum foil to reduce its sensitivity. (Be sure to put tape across any exposed charging contacts on the battery pack -- you would not want the battery to discharge through the foil.) Although the body shield method of

Continued on Next Page

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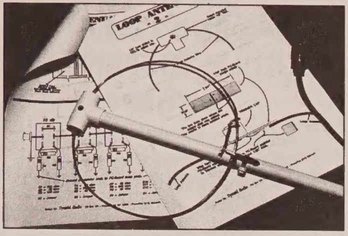

RDF equipment doesn't have to be complicated. Let experience help you as you build.

radio direction finding will not make you the best equipped, it is effective. After a recent lecture I gave on radio direction finding, one of the participants came in second place in a foxhunt the following weekend, using only an HT and his body as a shield.

Many hunters have found the best type of directional antenna is a small two or three element beam. If you do not have a beam then you can quickly make a simple loop antenna and attach it to an old broomstick. I have made loop antennas out of #12 copper house wire, brazing rod, and even out of an old metal coat hanger. You would be surprised how well even a simple antenna will work.

I have experimented with a portable quad made of a wooden 2x2 and dowels but found it very difficult to get it in or out of the back seat of my car, it really needed a permanent mount to be effective. A beam I will try on my next hunt has a boom made from PVC pipe and elements made from a metal tape measure. It is designed to allow the elements to bend when I take it in and out of my car.

If you compete often you will want to mount your antenna so that you can rotate it without getting out of your vehicle, saving precious time. The mount can be as simple as a mast stuck through a partially open window, or as sophisticated as one permanently attached to a roof rack. Those hunters whose car has a sunroof can create a mount which extends through the sun-roof opening. Whichever mount you decide to use make sure it is firmly attached. You would not want to have it come loose and hit a car behind you as you drive along. You might also check your local laws which regulate the distance an object may overhang the side of a vehicle. The antenna mount may need to be on the passenger side to be legal.

The only way to develop your RDF skills is to practice using them. Experiment with your equipment on known targets. You will learn what to expect from reflections of radio signals and will be able to tell if you are in an area with no direct signal. Once you get some experience you will be less likely to be fooled by a signal reflecting off of a water tower or building.

Join in the fun and practice your radio direction finding skills. Who knows, you may be the winner of your area's next hidden transmitter hunt.

Once you have equipped yourself with the basic equipment you can experiment with other techniques to determine the direction of a hidden transmitter. The two systems used most often are Time-Difference-Of-Arrival and Doppler. TDOA systems use two antennas and electrically switch between them at a rapid rate. They then analyze the phase of the received signals and use a meter which indicates when the transmitter is to the left, right, ahead or behind the hunter. Doppler systems use either four or eight antennas mounted in a circular pattern on the roof of the car. They then use the Doppler effect that occurs when they are rapidly switched to light one of a set of LED's mounted in a circular pattern. The LED that is lit indicates the direction to the hidden transmitter.

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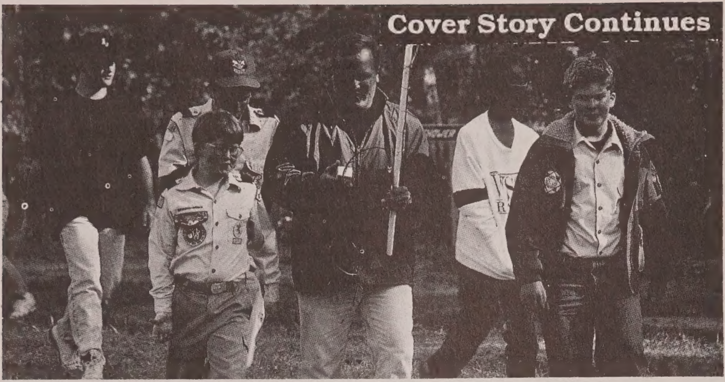


WB2HOL teaches a group of scouts how to find the fox and let's them go at it.

Demonstrate Ham Radio With A Public Fox Hunt

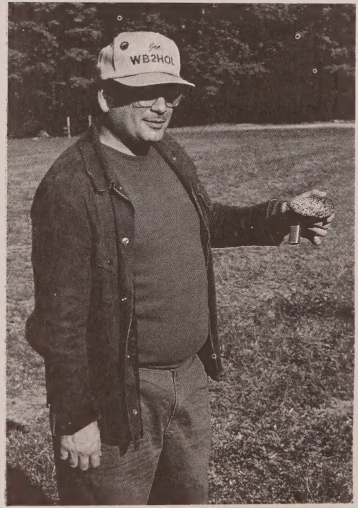
-by Steve Mosier, W3GRG

We're used to foxhunting to improve our DFing skills. But how about foxhunting as a demonstration of how much fun ham radio can be? We did just that at last year's Jamboree-on-the-Air at the local Boy Scout camp. In addition to having a number of stations on the air to let Boy Scouts talk to other Scouts around the world, we also put on a foxhunt.

Joe Leggio, WB2HOL showed up with a lot of DFing equipment -- enough for a lot of teams to participate in a hunt. We had tried this the year before and had been a little too ambitious. Our fox had been disguised in camo (including the mask and gloves) and our scouts just about stomped him to death before they found him. So this year, we decided to keep it simple. Joe hid his famous transmitting rock in nearby woods several times and let various teams of Boy Scouts, Cub Scouts, fathers, brothers, and sisters track it down.

As soon as a team found it and returned, they would say, "Can we do it again?" It was a real hit. It was also a hit with several hams who had never done it before, including Lesa Layno, KD4ANI and Kathy Flanyak, KQ4GW who grace our cover this month.

So next time you're thinking about how to get the public interested in ham radio, why not try foxhunting? Its an experience to remember.



Joe Leggio, WB2HOL and his "rock."

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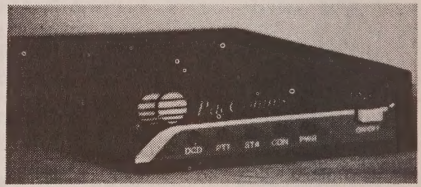

Cover Story Continues

You Never Know When You'll Need Your Foxhunting Gear

-by Tom Klimala, KM4LB

Probably the most difficult activity for dyed-in-the-wool DFers is the time they spend waiting for someone to drop a microphone between the cushions of a car seat, or for a transmitter to fail "keydown."

In the Raleigh area, we have found a tranquilizer for this pain - regularly scheduled foxhunts. We hold foxhunts every second Saturday of odd-numbered months. With this schedule, we avoid conflicts with holidays and major hamfests. Holding hunts on a regular basis has produced significant gains in experience, equipment, and awareness.

To paraphrase a well-known military statement, "you hunt like you train." In a real DF situation, experience pays off handsomely. The hunters know what their equipment can (and more importantly) can't do. In a pinch, I would put my money on an experienced body-fader over a novice with the most whiz-bang equipment. I've seen it. I've been there. A real hunt is no time to calibrate equipment or learn its shortcomings. And that's why we hold foxhunts.

If photography were my major hobby instead of ham radio, I doubt that I would buy any special filters to just photograph a total eclipse of the sun; the investment would not justify the expected use of the equipment.

Hams are more likely to spend their money and time building doppler antennas, active attenuators, mini-beams, and other DFing gear if they know they will have a chance to use them on a regular basis, not "maybe" once a year. Some of the projects will turn out fine, while others are best left in a dumpster near the end of a hunt. It may take two or three hunts to get the hang of the gear and to really understand what it is telling you about the signal. The important thing is that you guarantee immediate feedback on any investment you're willing to make in new DF gear.

Finally, regular hunts raise the awareness of the ham community on two fronts: they let everyone know who to call if a transmitter goes keydown at 2:00 am, and it puts troublemakers on notice that there is a group of well-trained, well-equipped DFers in the area. Publicizing your activities, before and after the actual hunt, will also help your group grow. It may take a while, but more and more hams will be marking their calendars two and three hunts in advance.

The only counseling I can offer to a new group starting out would be to keep it fun, (minimum rules, with no cutthroat competition), and don't be discouraged early in the program. Even if just one hunter shows up, hold the hunt. Afterwards, write a glowing article on how "everyone found the fox," even if you had to talk them in. Hey, all's fair in love and DFing.

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Fox Hunting With A Bear!

-by Monica Sandage, KD4DMI

The fox hunt was to begin at the mall at 2:00 pm. My husband Mike (WA4ZYF) would start checking in participants at 1:00. We left the house at 12:30, allowing ourselves plenty of time (or so I thought) to get across town to the starting point. If only I had known!

Mike decided that now was the time to put a new support shock on the Jeep's hatchback. I said OK, since there are some parts stores on the way to the mall. But Mike says that the last time he got a part he went to the other store on West Market Street (opposite side of town from the mall, of course).

I dealt with that one and we stopped at a store on the way to the mall. They didn't have it but could order it. Another store, same story.

About now the Bear started to show his fangs. "I told you if we'd gone to the store I wanted to in the first place, the hatch would be fixed by now and we wouldn't have to hold it up by hand!"

I managed to avoid commenting about how long the hatch had been broken. We now have ten minutes to get to check-in.

The Bear growls that the Jeep needs gas! Where's a gas station? I saw it too late and the Bear passed it. I'm not really familiar with this part of town. I "thought" there was one across from the mall. We topped the hill. No gas station in sight. The Bear's growling builds to a roar now.

"We'll just have to get gas later, and YOU can hold the hatch open when we stop! grrr....."

We made it to check-in just 2 minutes late. Mike started getting everyone signed in. The wind was blowing and it was cold. Real cold! Mike came back to the Jeep and asked me to go for gas. I did and also stopped at McDonald's to get the Old Bear a cup of coffee and some iced tea. I figured I could either warm him up or cool him off.

When I got back, Mike had finished check-in and everyone was ready to start. Roy, N4BYU, called on the repeater to be sure we could hear the fox. We couldn't. So Roy said not to worry, he'd figure something out. 15 minutes go by. Still no fox. So Roy dead-keys his mobile rig on the fox frequency, everybody gets their bearings, and we're off! We make the first turn. Oops. Coffee and tea all over the floor.

The Bear growls. "Pour that stuff out!"

The growling continued, but I got used to it.

"When I stop, be ready to jump out and hold up the hatch!" "Hold the map this way, not that way!" "Where are we?!" "Did we miss that last transmission?!" "We just came from there!" Growl! Snarl! Snap!

It was a long day, but we finally found Roy. Looking back on it, we really had a great time, and I've decided that foxhunting is pretty neat. I can't wait for the next one. I even decided that I have a pretty good partner, so I think I'll keep him. But next time.... we start early.

SERA Journal Cover Price Increases to $3

In keeping with the overall adjustment of income requirements for SERA to continue operating in a manner that is necessary, the cover price of the Repeater Journal has increased to $3.00.

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A Guide For Running A Foxhunt

-by Tom Klimala, KM4LB

Every foxhunt needs a guiding philosophy and a set of rules. In Raleigh, NC, we run regular foxhunts to get and keep people trained for DFing. We also want to have fun and so our rules are designed to draw contestants and keep them. Some clubs determine the winner by mileage rather than time so that the person who travels the least distance to get to the fox wins. This eliminates speedsters who get 8 fixes by circumnavigating the domain at 90 mph. Some clubs even require that your odometer be certified twice per year by a garage and if you're caught backing up you're disqualified. There are beginner's foxhunts and advanced/expert foxhunts, but remember that the tougher the rules, the harder it will be to build your group quickly.

When you decide on how you're run your foxhunt, publicize it well. Post packet bulletins with the starting point, time, and frequency to monitor for instructions. Announce it on your local 2m nets during the week. Publicize it in all of the club newsletters and meetings in your area.

The ARRL sells a book entitled TRANSMITTER HUNTING which has a rather extensive set of rules. It's a good book for projects, but at $19 it may be rather expensive for just the rules. If you're looking for a place to start, these are the rules we use in Raleigh:

1) Everyone starts from the same place.

2) At the start of the hunt, someone (not necessarily the fox) broadcasts:

a) the fox frequency (PLEASE don't put the fox on 146.52)

b) the fox transmitter output power

c) the type of antenna

d) the fox's domain (city limits, county, abc shopping mall, college campus, etc.)

e) a quitting time (two hours, three hours, etc.)

f) the rest of the rules (as appropriate).

This is done on the local repeater or other pre-arranged frequency - so in advertising and promoting the hunt, you just say, "Be in the BUYITALL parking lot at 10 am and monitor xxx.xx for foxhunt instructions/rules."

3) Hunters can work alone or in teams - however, they cannot ask for signal strength reports, or bearings from hams at base stations.

4) The first one to find the fox gets to be the fox next time.

5) If you find the fox, don't broadcast its location. Others may still be hunting and you don't want to ruin it for them.

6) You have to find the transmitter, not just the person transmitting.

For example, the fox may be using a dual band HT to crossband to a vehicle. So you have to find the transmitter on the fox frequency, in this case, the car itself.

7) The fox has to be in a public place, not on private property.

8) The fox should be in a safe place, not near traffic, trains, muggers, etc.

9) The fox has to be within 100 yds of a legal parking place. That doesn't mean the closest legal parking space will be available. For example, if the fox is in a public park or a mall, all of the parking spaces closest to the main entrance might be taken. This rule is mainly for our overweight, smoking hams who don't like climbing railroad embankments, and it also benefits the very aged or handicapped hunters.

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Finally! A Few Words From The Fox

-by Tom Pennebaker, WB4EQF

There are three classes of foxhunts:

CLASS 1 - BEGINNERS'S HUNT: Relatively easy to locate. Basic beam attenuator, related equipment is all that's necessary. The transmitting antenna will be in full view and identifiable. Little or no external hunting from vehicle.

CLASS 2 - INTERMEDIATE HUNT: Some degree of difficulty to locate. Emphasis will be on using very good state-of-the-art equipment and especially being able to interpret one's equipment accurately and efficiently. Some external hunting from vehicle will be necessary. The transmitting antenna will be identifiable, but will be in devious and unusual places.

CLASS 3 - ADVANCED HUNT: For the truly dedicated hunter. This hunt approaches the maximum challenge. In most cases the transmitting RF radiator will be identifiable only by proper use of RDF equipment. This is a no-holds-barred hunt! There will be no restrictions on the mobility or accessibility of the transmitter, or on changing the power of the transmitter or the parameters of the antenna during the hunt.

This was a Class 2 hunt. My strategy was to slow down the experienced and give the newcomers a fighting chance. I think we achieved this goal. I was expecting experienced hunters to use doppler, time-of-arrival, and various phasing systems which depend on vertical polarization. So I dug through my library and came up with an antenna that exhibits omni radiation and horizontal polarization. A smoking soldering iron, tubing cutter, copper tubing, capacitors, and a little tweaking of the gamma match and PRESTO!! One beautiful "HALO" antenna. It works! Next was a matter of power, which again the doppler, phasing, and time-of-arrival systems require to function. So I used an IC2AT in low power which could be heard by the newcomers using beams.

We decided to use a time-plus-mileage scoring system. Most hunts in our area have been scored on time only: the first team to arrive wins. But this creates havoc and reckless conditions. When the adrenalin starts flowing, nothing gets in your way. Your readings are shallow and inaccurate and this induces hunch hunting. On the other hand, mileage-only hunts can be a real drag. The last hunter in can win. It doesn't matter that the fox and everyone else has been waiting over seven hours to see who has won. On these hunts, you'd better pack a good lunch! So the time-plus-mileage uses the best of both worlds. If you don't interpret your equipment carefully, you won't win. But if you take your sweet old time, you won't win either. Our formula is 0.1 times minutes plus mileage. Obviously, mileage is the most critical element, but you can't ignore time.

I was disappointed that everyone didn't find me. Hiding and not being found is not my idea of foxhunting! So, everybody, get ready for the next one.

Hamfest Changes Site

-by Walt Sanders

The Lake Hartwell Hamfest, sponsored by the Anderson, Hartwell and Toccoa Clubs will be held Saturday and Sunday, May 22-23 at their new location. The event this year has moved to Saddler's Creek State Park, off SC 187 in Anderson County, SC.

Camping will be available starting Friday in the nearby campground.

Club officers for the Anderson club for the new year are: Jerry Lambert, N4BAD, Pres.; Cecil Foxworth, KA4OVN, VP; Walt Sanders, W4ZJI, Sec.; Joe McAber, KD4CKS, Treas. and Bob Carey, KK4SO, Activities.

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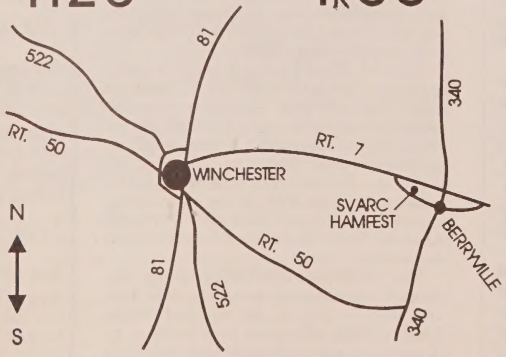

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Mellish Reef VK9Z DXpedition Planned

-by Murray Adams, WA4DAN

An international group of DXers have formed a team with the plan of activating Mellish Reef this fall. The ecpedition is scheduled for mid to late September. The operators include: Bill, VK4CRR; Harry VK2RQ/VK2BJL; Steve P29DX/G4VG; Murray, WA4DAN and Jack KB7NW, who will captain the yacht Banyandah on yet another Pacific DXpedition.

Jack captained the Banyandah on the successful 1982 Mellish Reef/Willis Island DXpedition among others. Harry VK2RQ/VK2BJL is a veteran of two previous Mellish Reef DXpeditions, including the one in 1982.

The group plans to have three to four stations operational around the clock during the eighg day stay on the reef. Operations will be on 160 thru 6 meters, utilizing mono-band yagis on the higher bands, and a combination of verticals and wire antennas on the lower frequencies. Legal limit amplifiers will be used.

Applications for funding are being mailed to all DX Foundations and clubs. In addition a grass roots campaign to get the word out and to appeal to interested DXers worldwide to help support this very difficult undertaking. A substantial deposit has already been made on the yacht Banyandah.

Generators, antennas, masts, fuel, coax, tents, etc..., will need to be purchased. Estimated costs for this DXpedition is approximately $30,000. If you would like to support the DXpedition, we would like to hear from you. Any contributions will be appreciated and used for the non-personal expenses on the DXpedition.

Any donations, questions, or additional information requests should be directed to Murray Adams, WA4DAN, 1993 Mellish Reef DXped, 403 East 14th Street, Greenville, NC 27858 OR Bill Horner, VK4CRR, 1993 Mellish Reef DXped, 26 Iron St. Gympie QLD 4570, Australis.

Checks should be made out to the "1993 Mellish Reef DXpedition". In the event the DXpedition is canceled, all monies will be returned. Please enclose an SASE so we can mail you an update before we depart for Mellish Reef.

Please pass the word to all your DXer friends. Thank you!

Blizzard In West Virginia

-by Ted Wolfe, WD4KHL

What later became known as the "Blizzard of '93" began in West Virginia on Friday night, March 12. The snow began falling then and kept on falling, eventually piling up record amounts around the state.

Some amateurs planning to depart for the Charlotte hamfest late that eveing or early Saturday took one look at the rapidly deepening snow and decided to cancel their plans. Others who had departed prior to the beginning of snowfall found themselves in for a longer stay away from home than they had planned.

Snowfall amounts reported around the state: 44" at Snowshoe Ski resort; 41" in Canaan Valley; 24" in Bluefield and Morgantown on opposite ends of the state; 27" at Berkeley Springs; 20" in Parkersburg along the Ohio River; 15" in Martinsburg and 17" in Charles Town. Huntington, also on the Ohio, got 23.6 inches.

Charleston, the state's capital city, got 17.2" Friday and Saturday, but a full 19.4" by storm's end. The totals were described by authorities as the greatest snowfall ever for the city in a 24-hour period. The total snowfall was the deepest on record for Charleston where weather records go back about 100 years.

By gubernatorial decree, the state's highways were closed to all but emergency vehicles Saturday and Sunday.

Even though Interstate 77 was reopened for traffic Sunday afternoon, Southbound motorists still couldn't move because Virginia authorities had closed the Big Walker Mountain tunnel further south on I-77. That caused a traffic backup in Mercer County, where most of the 14-hundred travellers who took refuge in public shelters around the state found themselves. In Charleston an estimated 25 trucks were stranded on a convenience store parking lot. The store was not open due to the storm, so volunteers carried food to those truckers who refused to leave their rigs.

Restaurants that managed to stay open reported long lines and steady business all weekend. One in Kanawha City, shorthanded, gave free meals to those travellers who volunteered to pitch in and help with service and kitchen chores.

Now for items involving amateur radio operators. Ken Harris, WA8LLM, reported eight RACES/ARES operators manned amateur and public service radios in the Wood County Emergency Operations Center from around 9:30 a.m. Saturday till 6:00 p.m. Sunday. The amateurs maintained radio links with all the surrounding counties via 2-meters voice and the Digital Amateur Radio Emergency Net (DAREN) on packet.

The ARES/Data (FINDERS) system was checked out and ready to receive data from any shelters set up by the Red Cross. RACES/ARES volunteers were ready to go if needed to any shelters to start inputting names of snowbound victims.

Operators at the EOC coordinated the locating of snowmobiles, fuel for emergency vehicles, road graders and wreckers, and took reports of missing persons, power outages, furnaces that went out and could not be re-lit, etc. Two of the RACES/ARES operators used their four wheel drives to transport telephone operators and nurses to work.

Doug Sweeney, N8AJC, of South Charleston, reported that as a Red Cross volunteer he was called on for assistance and arrived at the chapter house with his portable 2-meter rig around 3:30 p.m. Sunday, Mar 14.

The Red Cross put out a request for individuals having 4-wheel drive vehicles to assist in transporting doctors and nurses to their residences after they put in long shifts of 36 hours. Those responding were also sent to the homes of their relief shifts, doctors and nurses ready to go to work but unable to negotiate the highways. Another request was to assist in getting medication to people unable to get out. No taxis or buses were running and most drug stores were closed.

Besides Doug, other amateur involved were: James Andrews, KD8VT; his wife Karen Andrews, N8HUC; and his brother, Fred Andrews, N8GEL (all owners of 4WD vehicles); and Olie Rinehart, WD8V; Ken Rupe, WD8AEW; and Carl Casdorph, N8VQE.

A lot of non amateurs with four wheel drive vehicles also responded to the call and were used, but the amateurs were the only ones who could be dispatched by radio.

Doug and the others were able to secure at 5:30 a.m. on Monday morning. The

Continued on Page 21

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The Snow Storm of 1993

-by Lee McDaniel, WB4QOJ

Was "The Snow Storm of 1993" unique, well maybe not. A lot of snows have come and gone over the years in Virginia, and a lot worse probably will hit us in the future.

But what made this storm so bad was all the stranded cars and trucks on the road, especially in the far Southwest part of the state.

The Wytheville area was probably one of the worst hit just because of the stranded travelers and the I-77 and I-81 section through the area.

The snow started late Friday and got worse as time passed. AB4XX called the emergency net on the 146.775 Sand Mt. repeater and Amateur communications response began.

WB3T, N4KZL and WD4EMH started things off, with WD4EMH to the Rescue Squad, while WB3T started helping get stranded people off the roads to shelters that were starting to be put in place.

The big problem was I-77 blocked with thousands of cars and trucks from Big Walker Mt. tunnel southward. No one was moving, either way. Cars and trucks lined the highway, with drivers and passengers huddled inside, trying to keep warm.

Police and emergency vehicles, and highway trucks were unable to get through because all lanes were blocked with stranded vehicles.

In Wytheville, the George Wythe High School, the Community Center and Scott Memorial Elementray School were set up to be shelters. WB3T was the shuttle ham for many hours, ferrying people to the shelters, which also included Fort Chiswell HS and Draper Valley Pentecostal Church.

By Saturday night, the snow was over 20-inches deep, with drifts many feet deep. I-77 blocked even more. Food was flown in from Richmond via helicopter for stranded motorists around the Big Walker tunnel.

Sunday, AB4XX and N4KZL worked getting food to stranded motirists.

Finally on Monday, the roads were starting to open, as traffic began moving slowly. By now, up to 35-inches of snow had piled up. Road crews, police and emergency personnel worked around the clock trying to move wrecked, stranded, and disabled vehicles from the roads. Finally on the following Thursday, things got back to normal.

Many hams worked throughout the crisis - on the air coordinating and many in their own 4-wheel vehicles actually participating in the emergency work. They are the unsung heros who will probably never be intervewed by the press, or have their picture taken for a newspaper. But the motorist who was rescued by that ham, and grabbed his strong hand for assistance will remember him. That will be payment enough for all of them.

Many repeaters were on emergency power during the storm, their autopatches were taxed to the limit handling storm related calls and messages.

The WD4FOZ 147.045 Enob repeater along with the 145.05 WA4ZBP-5 node lost antennas in the snow storm.

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The Blizzard In WV

Continued from Page 20

amateur effort was prominently mentioned in media reports of Red Cross activity.

The Greenbrier County Emergency Services Net was activated Saturday, Mar 13, at 1:30 p.m. SWVARC volunteers were scheduled to operate one hour shifts until midnight. Members acting as net control were: Calvin, KB8LPP; Lynn, AI8I; Leonard, N8DIS; Norman, WA8AVZ; Harry, KF8TQ;Jack, KB8CM; Charlie, K8DRK; David, NY8G; Roy, KB8NCZ; and Gary, WV8D.

When the call for four-wheel drive vehicles went out to transport hospital personnel to Greenbrier Medical Center in Fairlea, Herb, KF8ZH, and Wayne, WB8SPW, answered the call.

The 146.730 Mhz repeater lost power around 7:45 p.m. Saturday night. Also down from loss of power were the 444.725 repeater and the LSBG packet node. The net was then moved to 146.520 simplex with Roy, KB8NCZ, acting as a vital link from his Muddy Creek Mountain station. Power to the repeater was restored around 9:30 p.m. Sunday night.

SWVARC President Gary Bostic, WV8D, reports the emergency communications/concessions trailer will be ready for use shortly (and for the next emergency). A foldover tower and antennas are being installed along with a window for dispensing food and drink. (Thanks to Calvin Christian, KB8LLP and Roy Spinks, KB8NCZ, for their letter outlining SWVARC's involvement during "the storm.")

Next time around the new repeater going up on Greenbrier Mountain just outside White Sulphur Spring on a frequency of 147.390 Mhz may be used in any emergency.

Editor's Note: Although Ted Wolfe was stranded in Charlotte, N.C. like so many others, he gave the call for storm news, and his WV friends responded, as usual with outstanding results, giving Ted first hand information about what happended back home.

Working With Topographic Maps

-by Tim Wishon, N4DZC

In this article, I will describe how to find the latitude and longitude of your repeater or whatever. There are two ways of doing it. The best way is to get a "Nascar GPS" or whatever the heck you call it receiver, go to the site, and read it. Unfortunately, those things cost about $1500 and I don't know where you get them. I ain't about to get one anyway, and neither is anyone else I know.

The other way is much more economical, but requires a bit more preparation. What you need to do is go to your nearest USGS map dealer. This would probably be like some of these places that sell hiking supplies or some of the larger bookstores.

Perhaps I should explain what a topographic map is, does, and how the heck it is related to ham radio or anything else. A topographic map is a map that shows the lay of the land, or, in other words, the elevations of the land in places. Also, the topo maps made by the United States Geological Survey, or USGS, have little-bitty squares on them where houses and buildings are. It's about like an aerial picture taken from way up in the air. And, they have the latitude and longitude grid on there too. This way, you can find the exact location of your repeater or house.

There are several different sizes of these maps. The most-used maps are the 7-1/2 minute series. They have a scale of one inch equals 2,000 feet. Each map covers an area of about 7 miles East to West, and about 8.5 miles North to South.

A State the size of North Carolina for instance, requires about 1000 of these maps!

If you know the general area of where you're at, they can usually help you at the store as to which map you need. Each map has a name. When you get your appropriate map, you'll also need a ruler to measure distances. An engineer's scale with one inch divided by 20 would be ideal, but a regular old ruler will suffice.

Here is an example of how to measure:

Let's say that Calvin Cowflop, KL7MOO, was able to twist enough arms for the State to let him put a ham repeater on the Big Pinnacle at Pilot Mt. State Park.

Calvin would need for coordination to find the latitude and longitude of the Big Pinnacle. He merely goes to his map store and asks for a map of the Big Pinnacle area. With the owners help, he can get his map for about $2.50.

There are two ways to get the latitude and longitude. There is somewhere, over the rainbow, a magical place where they make a thing to lay over the map, with a latitude and longitude grid on it. I never did find out where you get these, so I made one myself, in 10 second increments with an accuracy of + or - 1/4 second. (I'm not bragging>)

The other way to do it is with a plain old ruler. I used a ruler to do it long before I made the grid. Now, we are going to get technical. (Whoop-de-doo!)

Some people may be confused by all this talk about degrees, minutes and seconds. No problem. A circle is divided into 360 degrees. A degree can be divided by 60, into minutes. Then, a minute can be divided by 60 into seconds, just like on a clock.

The earth is divided the same way. The "prime meridian" for longitude, the lines running North and South, and being measured East and West, otherwise known as "0" degrees, runs thru Greenwich, England. 80-degrees West of Greenwich will put you on a line running North-South near Kernersville, NC. Latitude is measured in the same way, except the lines run East-West and are measured North-South. For example, 36-1/2 degrees, or, 36 degrees 30 minutes, North Latitude runs West thru the North side of Mt. Airy, NC. This line is 36 deg. 30 min. North of the Equator. So for now, back to the adventures of Calvin Cowflop.

The map Calvin now has, covers the longitude from 80 deg. 22 min. 30 seconds West to 80 deg. 30 min. 0 sec. West or 7-1/2 minutes. The same map covers latitude from 36 deg. 15 mins. 0 sec. North to 36 deg. 22 mins. 30 sec. North.

The map is divided into nine 2-1/2 blocks, with the latitude and longitude figures listed. Calvin notices that Pilot Mtn. park is located in the upper left block, and is near the indicator that shows 80 deg. 27' 30" West and 36 deg 20' 00" North.

He then draws a very light pencil line from the mark at the top of the map to that point, then from the same point to the mark on the left side of the map. Then, making sure the ruler is perfectly straight with the page, discovers that the big pinnacle on Pilot Mt. is a little over 2-5/16 inches west of 80 deg. 27' 30" West, and that it is a little over 1-3/16 inch North of 36 deg. 20' North.

The scale on the 7-1/2 minute maps is 1:24,000. With a regular ruler, with sixteenth inch graduations, one inch is 2000 feet. 1/16-inch is 125 feet. Multiple the number of sixteenths by 125 and that will give you the distance.

So the place is 4625 feet west of 80 27' 30, and it also is 2375 feet North of 36 20'. Now, all this is well and good, but how do you convert feet into minutes and seconds?

Well, I had to figure on that one. To make a long story short, the Latitude lines, running E-W and being measured N-S, one second was found to be 101.25 feet long. The longitude seconds, running N-S, and being measured E-W are 82.08333333 feet long or 82 feet 1 inch.

So Calvin figures that 4675 feet divided by 82.08333333 is 57 seconds west of 80 27' 30". You ADD if the seconds are WEST of the line, or meridian, and SUBTRACT if the seconds are EAST of the meridian.

So, 80 27' 30"W PLUS 57 seconds comes to (drum roll) 80 degrees 28 minutes 27 seconds WEST LONGITUDE!!

Now for the Latitude. 2375 feet divided by 101.25 comes to 23.45 seconds. You ADD if the seconds are NORTH of the meridian, and you SUBTRACT if the seconds are SOUTH of the meridian. I always round it off to the nearest second, so 36 20' 00" PLUS 23 seconds comes to 36 degrees 20 minutes 23 seconds NORTH LATITUDE.

Isn't this just thrilling? I don't fool with figuring the minutes, 75 seconds is 1 minute 15 seconds. Calvin now knows what to put down on his applications where it says, "actual repeater location". How exciting!

The only drawback to this method is that sometimes, if it is an older map, the place where the repeater or whatever is MIGHT not be on the map! If the place ain't on the map, then you have to approxzimate where it is, maybe put a little dot there, and THEN measure the latitude and longitude.

For instance the Yadkinsville USGS map was last updated in 1966. I saw another map of the East Bend area (the Vienna map) and I think it was 1986. I guess that's about as current as it gets. They do make something called an "orthophotoquad", which I believe must be an aerial photo, but it sounds more like something Mr. Spock would use to find intelligent life while orbiting planet Talos 4.

I mentioned earlier that I had made my own "layover" for the 7-1/2 minute maps. Well, mine is actually only 2-1/2 minutes, which is all that will fit on a normal 8-1/2 x 11 sheet. It would be possible to make one the full size of the map, but I'm not as well equipped as some of my surveyor friends. The maps are divided into nine 2-1/2 minute blocks, and the corners of the map I made fit nicely on the corners and little crossmarks of the USGS maps.

If you would like one of these things, just send me $3.00 to cover the cost of postage, envelopes, paper and wear and tear on the printer. Each one needs to be printed, because copiers can and do distort the size slightly, thereby screwing up the precision, and the darned thing won't work. My map is divided into 10-second blocks.

Write to me: Tim Wishon, N4DZC, Rt. 1, Box 545, Yadkinville, NC 27055.

I should probably point out that I am not any kind of licensed surveyor, engineer, or any other big-money title. I'm just a guy who gets carried away on getting his beam antenna pointed in the right direction.

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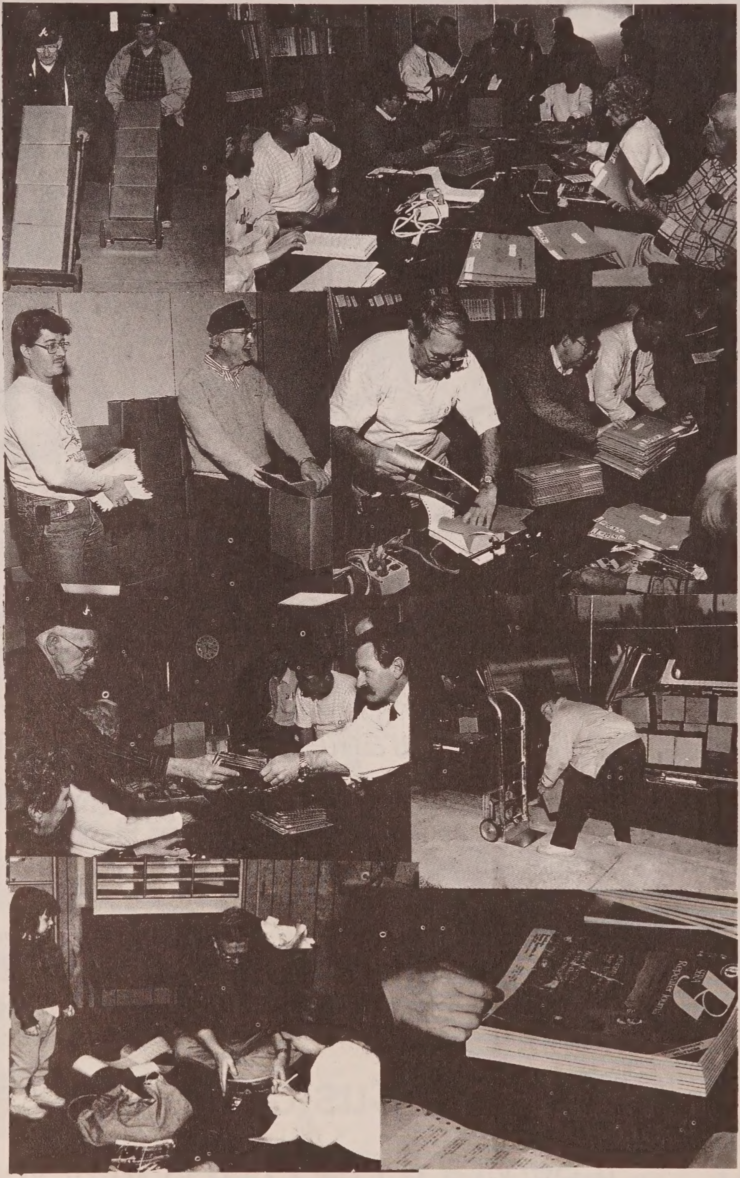

The GUILFORD AMATEUR SOCIETY (GAS) had their first taste of getting the Journal out last February. Photographers Steve Mosier, W3GRG and Bob Clarke, WD4ACR brought their cameras along and provided us with this glimpse of just what goes on when 5,000 Books are piled into a room ready to have labels affixed, then bagged according to zip code, mailing center and post office. The group used the Emergency Medical Service Building in Greensboro, thanks to Ernie Wall, WB4APF. Two trucks were provided by Bob Clark, and Banks Gambill, WB4VPY. Almost half of the Greensboro, N.C. area club turned out to receive training from SERA's David Ward, KA4LVO who will be turning the job over to the club by the next issue.

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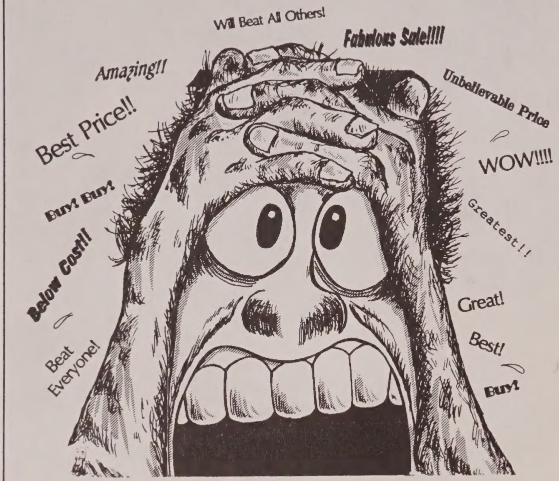
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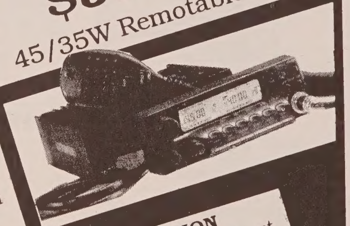

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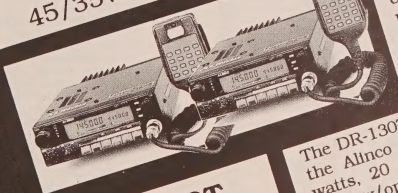

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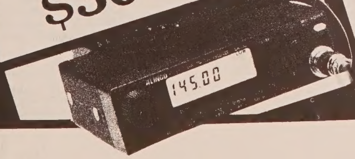

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Only N

THE SERA OFFICIAL REPEATER INDEX

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Repeater owners are reminded to contact their local Frequency Coordinator (Director) for assistance in coordination, changes in their listings, or any other requirements.

SERA SIMPLEX

6 meters:	52.49	52.51	52.525				
2 meters:	146.40*	146.415*	146.43*	146.445*	146.46*	146.475	146.49*
	146.505*	146.52	146.535	146.55	146.565	146.58	146.595
	147.51	147.525	147.54	147.555	147.57	147.585	
220 MHz:	223.44	223.46	223.48	223.50	223.52	223.54	223.56
	223.60	223.62	223.64	223.66	223.68	223.70	223.72
	223.74	223.76	223.78	223.80	223.82	223.84	223.86
	223.88	223.90					

* Permitted unless operation would cause interference to repeater inputs

10 Meter:	29.60						
440 MHz:	445.825	445.85	445.875	445.90	445.925	445.95	445.975
(not all listed)	446.00	446.025	446.05	446.075	446.10	446.125	446.15
SERA Suggested Digital Simplex:			145.01	145.03	145.05	145.07	145.09
	145.61	145.63	145.65	145.67	145.69	223.40	223.42
	223.58	223.66	223.70	223.72	223.74	223.76	223.78

NOTE: Digital operators are reminded to check with local Digital Societies for which digital channels are available for various digital usage, in their particular area. Some channels are for exclusive use of LAN or BBS, etc. usage.

DISTRIBUTION OF REPEATERS BY FREQUENCY

This by-frequency index contains repeaters in the States of Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee, Virginia and West Virginia.

PLEASE NOTE: The letters column between the frequency and the city indicates suffixes of the repeater callsign.

This index is correct as of April 19, 1993.

2 METERS

4.990/9.620	L	BERKELEY SPRINGS	WV
4.61 /2.525	ARK	NASHVILLE	TN
4.28 /EACON	MW	MEMPHIS	TN
4.297/EACON	ZRW	MEMPHIS	TN
4.51 /5.11	TUN	AUGUSTA	GA
	MXC	COCHRAN	GA
	UOX	DOUGLASVILLE	GA
	HYE	MENDENHALL	MS
	WA	PASCAGOULA	MS
	JTX	CHERRYVILLE	NC
	TOH	COLUMBIA	NC
	RXG	SAURATOWN MT	NC
	JMT	CONWAY	SC
	Y	COOKEVILLE	TN
	SBX	GRAY	TN
	BOX	JACKSON	TN
	QB	KNOXVILLE	TN
	ARK	NASHVLE/FAIRVIEW	TN
	YPE	RICHMOND	VA
	MCR	SALT ROCK	WV
4.53 /5.13	SEX	NEWNAN	GA
	Y	VALDOSTA	GA
	RBL	LA GRANGE	KY
	VF	MOREHEAD	KY
	YNF	AHOSKIE	NC
	CS	GREENWOOD/HODGES	SC
	KIV	SUMTER	SC
	CMY	CHATTANOOGA	TN
	O	#COLLIERVILLE	TN
	SSB	GALLATIN	TN
	OAK	LAFOLLETTE	TN
	KRM	#SHELBYVILLE	TN
	VL	GALAX/LKOUT MT	VA
	YET	HARRISONBURG	VA
	FHE	BUCKHANNON	WV
4.55 /5.15	MM	ALBANY	GA
	AQL	ATLANTA	GA
	LT	MILLEDGEVILLE	GA
	TLK	MONTICELLO	KY
	IWZ	PIKEVILLE	KY
	LFP	PICAYUNE	MS
	CVM	RANDLEMAN/GBO	NC
	OXE	INMAN	SC
	LWY	SUMMERTON	SC
	RJC	DECATUR-PONE KB	TN
	JXI	MEMPHIS	TN
	MJF	ALEXANDRIA	VA
	ARO	GREENBAY	VA
	HDB	MARMET	WV
	FSE	MARTINSBURG	WV
4.57 /5.17	JBF	COOLIDGE	GA
	DIW	JONESBORO	GA
	PRH	HALLS GAP	KY
	BRN	HORN LAKE	MS
	ZQB	NEWTON/ANDSN MT	NC
	UO	OXFORD	NC
	TUN	AIKEN	SC
	GBI	KNOXVILLE	TN
	BRN	MEMPHIS	TN
	LHO	MURFREESBORO	TN
	JOQ	LORTON	VA
	ZN	LORTON	VA
	ZUA	NORFOLK	VA
	FRV	BECKLEY/BOLT	WV
4.59 /5.19	ULJ	PINE MT/HAMILTON	GA
	UVT	BOONEVILLE	MS
	WGA	JACKSONVILLE	NC
	BVW	MT MITCHELL	NC
	OTT	CARTHAGE	TN
	XX	JASPER	TN
	FAX	RICHMOND	VA
	YJJ	RICHWOOD	WV
	JGY	WHEELING	WV
4.61 /5.21	KEC	EASTMAN	GA
	PSZ	FAYETTEVILLE	GA
	U	DEANE	KY
	WRE	POPLARVILLE	MS
	TQD	TRENTON	NC
	NEP	GASTON	SC
	BBB	KNOXVILLE	TN
	ARK	NASHVILLE	TN
	MS	KILMARNOCK	VA
	QOJ	ROANOKE/POOR MT.	VA
	RAG	WINCHESTER	VA
	FEQ	HUNTINGTON	WV
4.63 /5.23	JEH	CONYERS	GA
	UJ	DALTON	GA
	COL	WAYNESBORO	GA
	PRH	LEXINGTON/GEORGE	KY
	PRH	LOUISVILLE	KY
	VBH	BEULAVILLE	NC
	BFB	CHARLOTTE	NC
	RA	LAVERNE	TN
	KIE	MAYNARDVILLE	TN
	DBB	BEDFD/APL ORCH	VA
	MT	NEWPORT NEWS	VA
4.65 /5.25	BLQ	CLAYTON	GA
	GL	SCOTTSVILLE	KY
	WXS	BAKERSVILLE	NC
	SJE	GREENSBORO	NC
	UIV	CHARLESTON	SC
	BRV	ERWIN	TN
	DRL	FISHERVILLE	TN
	MMI	POCAHONTAS	TN
	CZJ	BEAVERDAM	VA
4.67 /5.27	CGV	SANDERSVILLE	GA
	PN	WALESKA/PNLGMT	GA
	NBG	WALLS	MS
	DZJ	WIGGINS	MS
	KNI	HENDSVL/BERWLW M.	NC
	AR	MIDWAY	NC
	BQF	RALEIGH	NC
	GYM	WEST COLUMBIA	SC
	WZK	HENDERSONVILLE	TN
	CJX	SEV/SHIELDS MT	TN
	SKE	MARION	VA
	J	STAFFORD	VA
	FMD	CRAIGSVILLE	WV
4.69 /5.29	DRQ	ATLANTA	GA
	TDL	AUGUSTA	GA
	PL	LAWRENCEBURG	KY
	PRH	STANTON	KY
	L	VICKSBURG	MS
	BFB	CHARLOTTE	NC
	GGD	GREENSBORO	NC
	VCM	CHATTANOOGA	TN
	SQC	JOHNSON CITY	TN
	FFM	RIDGETOP	TN
	YLX	CHARLOTTESVILLE	VA
	NDH	CHESAPEAKE	VA
	YLX	TROY	VA
	ZXP	GLENVILLE	WV
4.71 /5.31	CEK	COLUMBUS	GA
	JDR	STOCKBRIDGE	GA
	GOJ	CHATAWA	MS
	WPM	BAKERSVILLE	NC
	QAA	GREENSBORO	NC
	GY	BEAUFORT	SC
	PF	ROCK HILL	SC
	PNI	ATHENS	TN
	SC	JACKSON	TN
	ECD	LAFAYETTE	TN
	FXP	HERNDON	VA
	G	BECKLEY/LAYLAND	WV
4.73 /5.33	OGE	JONESBORO	GA
	YUU	LEXINGTON	KY
	CYR	GULFPORT	MS
	J	MT. AIRY	NC
	YP	PIKEVILLE	NC
	DFP	BAMBERG	SC
	DBJ	CUMBERLAND CITY	TN
	TEM	KNOXVILLE	TN
	DRL	MEM/FISHERVILLE	TN
	QQI	FARMVILLE	VA
	F	NORFOLK	VA
	QC	PARSONS	WV
	M	WILLIAMSON	WV
4.75 /5.35	DOC	ATLANTA	GA
	DOC	ATLANTA	GA
	FGQ	ROSSVILLE	GA
	GLI	ELIZABETHTOWN	KY
	DAX	MOUNTAIN ASH	KY
	WMH	OLIVE BRANCH	MS
	AOS	CHARLOTTE	NC
	JPQ	GREENVILLE	NC
	Y	HUMBOLDT	TN
	JYD	NOLENSVILLE	TN
	AZJ	BLAND	VA
	AQD	FALLS CHURCH	VA
	SP	FAIRMONT	WV
4.77 /5.37	UA	AUGUSTA	GA
	IZF	JASPER	GA
	NNX	HATTIESBURG	MS
	PYQ	SOUTHAVEN	MS
	AGN	N. WILKESBORO	NC
	MII	OXFORD	NC
	PPD	SHALLOTTE	NC
	GRC	KNOXVILLE	TN
	OG	SMITHVILLE	TN
	UKJ	FOREST	VA
	TOG	GLOUCESTER	VA
	VS	BECKLEY/EOC	WV
	VNQ	PARSONS	WV
4.29 /5.39	RPB	CORINTH	MS
4.79 /5.39	HYB	GRIFFIN	GA
	KDZ	FRANKFORT	KY
	DG	MONROE/UCARS	NC
	NXU	BOWMAN	SC
	AM	CHATTANOOGA	TN
	EPC	GREENEVILLE	TN
	DOR	LEBANON	TN
	ARO	ROANOKE/POOR MTN	VA
	EOM	WESTON	WV
4.81 /5.41	PME	ATLANTA/BELL	GA
	I	#AUGUSTA	GA
	PXX	BRNSWK/JEKYLL IS	GA
	NON	COVINGTON	KY
	DC	GLASGOW	KY
	IF	D'IBERVILLE	MS
	XO	HIGH POINT	NC
	KNU	WILLIAMSTON	NC
	VIH	DOVER	TN
	NKM	GREENEVILLE	TN
	SSB	MONTEAGLE	TN
	ZMS	BEDFD-APL ORCH	VA
	QIJ	WILLIAMSBURG	VA
	FHE	BUCKHANNON	WV
	HYX	LIBERTY	WV
4.83 /5.43	OLL	MACON	GA
	LCI	MARIETTA	GA
	LVU	COLUMBUS	MS
	ITL	SPARTA/GREEN MT	NC
	GYM	WEST COLUMBIA	SC
	YTU	BROWNSVILLE	TN
	UCE	COOKEVILLE	TN
	IUA	KNOXVILLE	TN
	SQT	RICHMOND	VA
	L	CHARLESTON	WV
	LG	MORGANTOWN	WV
4.85 /5.45	BOC	DECATUR	GA
	TX	LEXINGTON	KY
	PLY	CROWDERS MT/GAST	NC
	WTX	DURHAM	NC
	GRW	NEWPORT	NC
	SIR	BENTON	TN
	KOG	COVINGTON	TN
	KO	HOHENWALD	TN
	LP	MORRISTOWN	TN
	E	SPRING HILL	TN
	HQ	SALUDA	VA
	LGY	GRANTSVILLE	WV
	SXZ	WELCH	WV
4.87 /5.47	UV	HINESVILLE	GA
	CLA	SWEAT MT/MARIETT	GA
	GGH	BARDSTOWN	KY
	WMM	MAYSVILLE	KY
	OIX	KINSTON	NC
	NC	SAURATOWN MT	NC
	RG	GAFFNEY	SC
	DDK	MYRTLE BEACH	SC
	GBI	KNOXVILLE	TN
	OMO	MOUNTAIN CITY	TN
	ARK	NASHVILLE	TN
	EFJ	ARLINGTON	VA
	ZCM	CLARKSVILLE	VA
	FG	RICHWOOD	WV
4.89 /5.49	DV	AUGUSTA	GA
	WUJ	CORDELE	GA
	QPL	MARIETTA	GA
	KVK	HENDERSON	KY
	CWF	NICHOLASVILLE	KY
	VGK	FULTON	MS
	ZCZ	FRANKLIN	NC
	DZ	GIBSONVILLE	NC
	BWC	RALEIGH	NC
	ABW	RKY RDG/WALLACE	SC
	LHO	MCMINVL/SHT MT	TN
	KOG	MEMPHIS	TN
	MOP	BLUEFIELD	VA
	OHX	NEWPORT NEWS	VA
	MOP	BLUEFIELD	WV
	G	PARKERSBURG	WV
4.625/5.525	YYD	#FORT MTN	GA
6.265/5.865	KP	TRENTON	TN
6.01 /6.61	CVY	COLUMBUS	GA
	JEH	CONYERS	GA
	BDP	#WARNER ROBINS	GA
	KWV	CORBIN	KY
	IXI	LAUREL	MS
	SNI	GREENSBORO	NC
	JMS	NEW BERN	NC
	NYK	GRNVLE/CSRS HD	SC
	CMY	CHATTANOOGA	TN
	PCD	NASHVILLE	TN
	LSP	ABINGDN/BRMLY MT	VA
	GSP	CHESAPEAKE	VA
	WWQ	LYNCHBURG	VA
	MZI	GASSAWAY	WV
6.025/6.625	UPE	ATL/UNION CITY	GA
	UJT	ELBERTON	GA
	ZZ	VIDALIA	GA
	WO	PORT GIBSON	MS
	RR	LAURINBURG	NC
	IP	CHESTER	SC
	GBI	KNOXVILLE	TN
	ABU	MARTIN	TN
	AVW	NEW MARKET	VA
	G	FLAT TOP/WINTRPL	WV
6.04 /6.64	QGR	ATLANTA	GA
	MWQ	AUGUSTA	GA
	FWD	CARROLLTON	GA
	CEX	WAYCROSS	GA
	UXJ	CAMPBELLSVILLE	KY
	NIL	JACKSON	MS
	NAY	MOOREVILLE	MS
	YAO	HENDERSONVILLE	NC
	DW	RALEIGH	NC
	NC	WINSTON-SALEM	NC
	KIV	SUMTER	SC
	KQQ	#MEMPHIS	TN
	NTM	NASHVILLE W	TN
	QYI	#ROCKWOOD/MT ROO	TN
	WIC	FINASTLE	VA
	QLF	MARION	VA
	QEY	RICHMOND	VA
	EZR	HUNTINGTON/CHAS	WV
6.055/6.655	NFP	ATLANTA/MARIETTA	GA
	MNI	BOWLING GREEN	KY
	DZC	DANVILLE	KY
	CEB	CONCORD/KANNAP.	NC
	VTX	ELIZABETH CITY	NC
	RYR	ALCOA	TN
	OKV	BROWNSVILLE	TN
	AM	CHATT/SIGNAL MT	TN

	ME	COLLINWOOD TN	TN
	PDP	ALEXANDRIA	VA
	ISI	ALTAVISTA	VA
	TC	CLARKSBURG	WV
	BUC	UPPER TRACT	WV
6.06 /6.66	BKM	MACON	GA
6.07 /6.67	NSO	GAINESVILLE	GA
	EQL	JESUP	GA
	VHF	HAZARD	KY
	KBL	PRINCETON	KY
	CAX	NEW ALBANY	MS
	FHB	BURLINGTON	NC
	BKU	CHERRY MT	NC
	RPC	YAUPON BEACH	NC
	U	ST. MATTHEWS	SC
	DKI	BRISTOL	TN
	BGW	LAFOLLETTE/WMT	TN
	NTM	NASHVILLE W	TN
	HZS	BARREN SPRINGS	VA
	NTG	WILLIAMSBURG	VA
	JNU	RAVENSWOOD	WV
6.085/6.685	WL	ADAIRSVILLE	GA
	UWN	FAYETTEVILLE	GA
	KQ	OWENSBORO	KY
	KHB	NATCHEZ	MS
	NBR	GRIFTON	NC
	EHL	STATESVILLE	NC
	CO	NEWBERRY	SC
	PIO	WALLAND	TN
	HTA	VIENNA	VA
	FMD	CLARKSBURG	WV
6.10 /6.70	MM	ALBANY	GA
	OOM	JASPER	GA
	DOJ	MILLEDGEVILLE	GA
	TO	SAVANNAH	GA
	JO	GRAYSON	KY
	BDC	LOUISVILLE	KY
	YGM	UNION CITY (TN)	KY
	GY	BAY ST. LOUIS	MS
	LVA	GRENADA	MS
	DEJ	MERIDIAN	MS
	CID	DUNN	NC
	PAX	LANCASTER	SC
	KUD	ANDERSON CTY	TN
	UOT	MANCHESTER	TN
	MMI	RAMER	TN
	YGM	UNION CITY	TN
	AU	DANVILLE/WHT OAK	VA
	MGQ	ELK CRK/IRON MTN	VA
	D	NORFOLK	VA
	LQC	PENNINGTON GAP	VA
	XD	STAUNTON	VA
	JNU	RAVENSWOOD	WV
6.115/6.715	NVG	LAVONIA	GA
	ABZ	RINGGOLD	GA
	B	BEREA	KY
	TQY	GREENWOOD	MS
	GGN	MILLERS CREEK	NC
	KDC	SPRING LAKE	NC
	NEP	COLUMBIA	SC
	JUB	SALTILLO	TN
	I	BLACKSBURG	VA
	TXE	STERLING	VA
	GL	SHERRARD	WV
6.13 /6.73	MM	ALBANY	GA
	NC	ATLANTA/SWEAT MT	GA
	TVE	BRUNSWICK	GA
	STY	#DAWSON SPRINGS	KY
	SWF	DORTON	KY
	AO	LANCASTER	KY
	IF	BILOXI	MS
	VZF	STARKVILLE	MS
	BWC	RALEIGH	NC
	EXU	SALISBURY	NC
	VNK	WILMINGTON	NC
	FKJ	N. AUGUSTA	SC
	BJY	SIMPSONVILLE	SC
	IOB	KNXVL/ENG MT	TN
	DAZ	MEMPHIS	TN
	WA	WATERTOWN	TN
	DHO	HAMPTON	VA
	AVZ	LEWISBURG	WV
6.145/6.745	KF	ATHENS	GA
	TTC	GREENVILLE	KY
	N	DILLON/PEE DEE	SC
	RCK	DYERSBURG	TN
	UP	OLIVER SPRINGS	TN
	DY	ROANOKE/POOR MT	VA
	L	BERKELEY SPRINGS	WV
6.16 /6.76	BOC	STONE MT	GA
	ELN	VALDOSTA	GA
	NSY	#FERN CREEK	KY
	KJQ	LEXINGTON	KY
	CUW	PADUCAH	KY
	AXQ	JACKSON	MS
	BVW	ASHVL/MT PISGAH	NC
	GGD	GREENSBORO	NC
	S	SWANSBORO	NC
	THL	WILSON	NC
	ESG	AWENDAW	SC
	LSP	BRISTOL/HLSTN MT	TN
	PQP	NASHVILLE	TN
	TFZ	CHARLOTTESVILLE	VA
	ZIN	WILLIAMSBURG	VA
	VA	HUNTINGTON	WV
	CUL	MORGANTOWN	WV
	ZQ	WHEELING	WV
6.175/6.775	NFP	MARIETTA	GA
	NA	WRENS	GA
	PPM	MIDDLESBORO	KY
	TKI	VANCEBURG	KY
	JYH	SOUTHPORT	NC
	GYM	COLUMBIA	SC
	O	FRUITLAND	TN
	OYG	PULASKI/MUSIC MT	TN
	T	WYTHEVILLE	VA
	BWZ	ELKINS	WV
6.19 /6.79	DMK	FOLKSTON	GA
	KOW	MOULTRIE	GA
	SEX	NEWNAN	GA
	VYX	SWAINSBORO	GA
	YWH	HIGHLAND HEIGHTS	KY
	U	PAINTSVILLE	KY
	TYP	BILOXI	MS
	S	WEST POINT	MS
	LZD	CLINTON	NC
	QDK	SAURATOWN MT	NC
	FVV	ANDERSON/SAS MT	SC
	USN	CHARLESTON	SC
	AM	CHATTANOOGA	TN
	ABR	JOHNSON CITY	TN
	SQE	NASHVILLE	TN
	SD	CHESAPEAKE	VA
	LBL	FAIRFAX	VA
	OQC	OAK HILL	WV
6.205/6.805	IEZ	JULIETTE	GA
	NNE	GUTHRIE	KY
	C	STARKVILLE	MS
	EWG	FAYETTEVILLE	NC
	IZF	GASTONIA	NC
	O	ORANGEBURG	SC
	NNE	GUTHRIE (TN/KY)	TN
	HTI	COVINGTON	VA
7.405/6.805	AQS	CALHOUN/JASPER	GA
6.22 /6.82	MM	ALBANY	GA
	DOC	ATLANTA	GA
	HVK	KIBBEE	GA
	N	DRAKESBORO	KY
	MBA	GREENVILLE	MS
	PZA	ROARING GAP	NC
	GMP	WILMINGTON	NC
	NYK	GRNVLE/PARIS MT	SC
	OAH	LAKE CITY	TN
	BS	MEMPHIS	TN
	SFF	WINCHESTER	TN
	WWB	GATE CITY	VA
	RKC	WINCHESTER	VA
	IFS	CHARLESTON	WV
6.235/6.835	GSS	THOMSON	GA
	ZOX	SALVISA	KY
	PLA	#ASHEVILLE	NC
	UOR	NAGS HEAD/BODIE	NC
	USH	WADESBORO	NC
	UDD	CHARLESTON	SC
	IDG	WATERTOWN	TN
	DCX	GRUNDY/BIG A MT	VA
	UTN	RUSTBURG/LONG MT	VA
	EUN	GLENVILLE	WV
7.435/6.835	KHQ	DAHLONEGA	GA
	NNR	HIGH POINT	NC
6.25 /6.85	DVJ	DALLAS	GA
	QWI	WARNER ROBINS	GA
	CLL	BOWLING GREEN	KY
	IV	PIKEVILLE	KY
	VNO	BAY ST. LOUIS	MS
	JMD	BUDE	MS
	BWW	CLEVELAND	MS
	MFK	IUKA	MS
	LWC	KOSCIUSKO	MS
	CYP	GOLDSBORO	NC
	MDW	HICKORY/BRT. MT	NC
	UEC	REIDSVILLE	NC
	ULH	FLORENCE	SC
	KJH	GTLBG/COVE MTN	TN
	KOG	MEMPHIS	TN
	TK	NASHVILLE	TN
	POX	PORTSMOUTH	VA
	ZBP	STAUNTON	VA
	WDK	BECKLEY/FLAT TOP	WV
	L	BUCKHANNON	WV
6.265/6.865	DKY	MADISON	GA
	UW	RICHMOND	KY
	YF	LAURENS	SC
	G	FAYETTEVILLE	TN
7.465/6.865	DWU	ELLISVILLE	MS
	FOY	MURPHY/STALCUP	NC
	ZRS	WAXHAW	NC
	AA	#CROSSVILLE	TN
	E	MOUNTAIN LAKE	VA
6.28 /6.88	CVY	COLUMBUS	GA
	IUD	MARIETTA	GA
	FGH	QUITMAN	GA
	HBB	SAVANNAH	GA
	OAU	LOUISVILLE	KY
	AI	SOMERSET	KY
	QNE	JACKSON	MS
	AAY	PASCAGOULA	MS
	TQD	RALEIGH	NC
	NYR	SHELBY	NC
	WIF	ORANGEBURG	SC
	CYZ	BRISTOL	TN
	ETE	MEMPHIS	TN
	TOA	NASHVILLE	TN
	SKH	OAK RIDGE	TN
	CYZ	BRISTOL	VA
	ZBE	RICHMOND	VA
	PDL	SALEM	VA
	CQV	SO. CHARLESTON	WV
6.295/6.895	RBS	HARTWELL	GA
	SM	MACON	GA
	JBV	FLORENCE	KY
	YFF	MADISON	NC
	ABW	PAGELAND/HIPOINT	SC
	RAG	CHARLOTTESVILLE	VA
	KXV	VIRGINIA BEACH	VA
7.495/6.895	LUQ	DALLAS	GA
6.30 /6.90	WVH	IRVINGTON	KY
6.31 /6.91	HIG	CLEVELAND/LONG	GA
	HYB	GRIFFIN	GA
	GFY	MOREHEAD	KY
	VV	HERNANDO	MS
	OCM	NATCHEZ	MS
	ZGQ	AHOSKIE	NC
	MOE	ASHVL/SPIVEY MT	NC
	YZF	FAYVLLE/CFARS	NC
	IZM	LEXINGTON	NC
	BWZ	WHITE HALL	SC
	GZX	CLEVELAND	TN
	DQU	SAVANNAH	TN
	YXA	SHORT MTN	TN
	AXH	CHASE CITY	VA
	TUE	MT.LAKE/BALD KNB	VA
	XG	TYSONS CORNER	VA
	FQN	MCMECHEN	WV
6.325/6.925	ASI	COVINGTON	GA
	PJR	JESUP	GA
	BEJ	RADCLIFF	KY
	VOJ	CORINTH	MS
	OBW	SULPHUR SPRINGS	TN
	TFZ	CHARLOTTESVILLE	VA
	QT	DANVILLE(DCC)	VA
	OGY	PRINCETON/PIPEST	WV
6.34 /6.94	N	AUGUSTA	GA
	VO	ROME/MT. ALTO	GA
	RVB	WRIGHTSVILLE	GA
	SN	ASHLAND	KY
	WZH	GLASGOW	KY
	AUZ	#LEXINGTON	KY
	NTB	MURRAY	KY
	DWX	AMORY	MS
	SBK	JACKSON	MS
	JMD	MCCOMB	MS
	DLH	BURGAW	NC
	BFB	CHARLOTTE	NC
	BFT	DURHAM	NC
	VM	MANTEO/WANCHESE	NC
	NZ	MT AIRY	NC
	PBC	CHARLESTON	SC
	IQQ	GREENVILLE	SC
	GBI	KNOXVILLE	TN
	BSM	MEMPHIS	TN
	PCD	NASHVILLE	TN
	UMI	HAMPTON	VA
	ZA	RICHMOND	VA
	AP	ROANOKE	VA
	CWO	WEIRTON	WV
6.355/6.955	KIN	PERRY	GA
	PRE	ROCKY TOP MT	GA
	OCP	RABBIT HASH	KY
	OB	ISOLA	MS
	AVP	ROCKINGHAM	NC
	E	ONEIDA PEAK/BLF	VA
6.37 /6.97	CLJ	ATLANTA	GA
	HBB	SAVANNAH	GA
	DPP	HENDERSON	KY
	TUK	STANTON	KY
	MJM	MERIDIAN	MS
	ZH	PASCAGOULA	MS
	DHS	WINONA	MS
	XRY	MT AIRY	NC
	JQ	SMITHFIELD	NC
	SZ	ANDERSON	SC
	ISM	FLORENCE	SC
	TRC	KNGSPT/BAYS MT	TN
	MWQ	MCMINNVILLE	TN
	RWK	MEDINA	TN
	SKH	OAK RIDGE	TN
	FPM	MANASSAS	VA
	WRN	STAUNTON	VA
	KXV	VIRGINIA BEACH	VA
	E	LOGAN/WARD RK MT.	WV
	CRW	PARKERSBURG (OH)	WV
6.38 /6.98	BEJ	ELIZABETHTOWN	KY
6.385/6.985	I	AUGUSTA	GA
	HHH	ELLIJAY/TALONA M	GA
	TOV	PRESTON	GA
	UUB	ST. MARYS	GA
	FE	WARM SPRINGS	GA
	DMT	SENATOBIA	MS
	OGB	ALBEMARLE	NC
	PVE	MARION	NC
	IY	FRANKLIN	TN
	CA	ROANOKE/POOR MT	VA
	EIV	CHARLES TOWN	WV
	LL	NEW MARTINSVILE	WV
6.40 /7.00	NNO	ATLANTA	GA
	OQX	ROCHELLE	GA
	UFH	CORINTH	MS
	QFX	WATER VALLEY	MS
	FVO	JACKSONVILLE	NC
	AZA	THOMASVILLE	NC
	HE	COLUMBIA	SC
	YLT	MARION	SC
	YXZ	PICKENS	SC
	AZQ	KNOXVILLE	TN
	ZJM	MEMPHIS	TN
	HMT	SUFFOLK	VA
	WMX	ST ALBANS	WV
6.64 /7.00	HE	LEXINGTON	SC
7.60 /7.00	LR	SHELBYVILLE	KY
	NRR	#VIRGIE	KY
	M	WILLIAMSBURG	KY
	NKZ	COLUMBUS	MS
	KMG	BLOUNTVILLE	TN
	SGA	CLARKSVILLE	TN
	QS	COLLEGEDALE	TN
	ZR	TERRA ALTA	WV
6.415/7.015	GIS	CARTERSVILLE	GA
	XRY	YADKINVILLE	NC
	M	LYNCHBURG	VA
	AXO	NORTON/HIGH KNOB	VA
7.615/7.015	DT	BONAIRE	GA
	UM	MIDWAY	GA
	FDK	LEXINGTON	KY
	JHK	MONTICELLO	MS
	KPF	LK NORMN/CLT	NC
	YP	SELMA	NC
	UMU	#SUMTER	SC
	JVV	LEBANON	TN
	KS	ROCKWOOD/MT ROOS	TN
	YGM	UNION CITY	TN
	LNT	FREDRICKSBURG	VA
6.43 /7.03	D	LAUREL	MS
	YTZ	ROCK HILL	SC
	DRL	GRANDJUNCTION	TN
	MVR	LEXINGTON	TN
	JST	RICHMOND	VA
7.63 /7.03	REI	ATLANTA/AIRPORT	GA
	ZVL	HOPKINSVILLE	KY
	PJZ	LOUISVILLE	KY
	LDD	OCEAN SPRINGS	MS
	GG	GREENSBORO	NC
	3	ROANOKE RAPIDS	NC
	FOF	BARNWELL	SC
	HOG	N. MYRTLE BEACH	SC
	YGI	COLLIERVILLE	TN
	NIQ	FAYETTEVILLE	TN
	DRL	GRAND JUNCTION	TN
	LP	MORRISTOWN	TN
	IT	MULLENS/HRNDN MT	WV
	ECC	ST MARYS/BENS R	WV
7.64 /7.04	RNF	WINFIELD (AL)	MS
6.445/7.045	AIH	ANDREWS/ROBBINSV	NC
	FLR	FAYETTEVILLE	NC
7.645/7.045	TYM	METTER	GA
	NFA	WATKINSVILLE	GA
	VF	GRETHEL	KY
	VF	LEXINGTON	KY
	BEC	BALD CREEK	NC
	EHL	STATSVL/ASBRY MT	NC
	HKZ	COOKEVILLE	TN
	AYN	NASHVILLE	TN
	FOZ	STAUNTON/EL. KB	VA
	SBC	VIRGINIA BEACH	VA
6.46 /7.06	CQ	CHARLOTTE	NC
	LBM	ALTON	VA
	PNC	PRINCETON	WV
7.66 /7.06	DDI	MACON	GA
	CLA	ROSWELL	GA
	UCJ	THOMASVILLE	GA
	WQ	PADUCAH	KY
	OCF	RICHTON	MS
	LED	MACO	NC
	VFR	SUMTER/SHAW	SC
	UG	GRNVLE/VIKING MT	TN
	MQQ	MEMPHIS	TN
	QEB	#SHELBYVILLE	TN
	ECM	ENON	VA
7.67 /7.07	NMC	LOUISVILLE	KY
7.675/7.075	JXR	LAWRENCEVILLE	GA
	CJB	PEMBROKE	GA
	TLP	OWINGSVILLE	KY
	Y	JACKSON	MS
	HBQ	BURLINGTON	NC
	L	NEWTON	NC
	E	GREENBRIER	TN
	GBI	KNOXVILLE	TN
	O	MCNAIRY	TN
	HBU	NORFOLK	VA
	PNT	WAYNESBORO	VA
	QC	MORGANTOWN	WV
7.69 /7.09	NA	CHEAHA MTN (AL)	GA
	YHM	EATONTON	GA
	CVE	ST SIMONS ISL	GA
	YK	PHELPS	KY
	DSN	AMORY	MS
	MRS	NEW HEBRON	MS
	GDF	GREENVL/ESTN NC	NC
	RP	ORANGEBURG	SC
	JLA	SPARTANBURG	SC
	ATI	GERMANTOWN	TN
	NLP	JAMESTOWN	TN
	VL	GALAX/BRIRP MT	VA
	TZE	OILVILLE	VA
7.705/7.105	YSB	ATLANTA	GA
	D	STATESBORO	GA
	KFD	CALVERT CITY	KY
	ZAC	HARLAN	KY
	ZAC	#HARLAN/PINE MTN	KY
	FGA	MARION	KY
	HXG	WAYNESBORO	MS
	OX	BROADWAY	NC
	JCK	MONROE	NC
	GHH	MOUNTAIN HOME	NC
	TC	HENDERSON	TN
	IDG	SHOP SPRINGS	TN
	JBJ	BEDFORD	VA
	SR	CHESAPEAKE	VA
	Z	SPENCER	WV
6.09 /7.11	ZLR	#LOGAN	WV
7.72 /7.12	MM	ALBANY	GA
	S	AUGUSTA	GA
	CMA	CEDARTOWN	GA
	HCA	CLARKESVILLE	GA
	U	BENTON	KY
	ASZ	WINCHESTER	KY
	N	ACKERMAN	MS
	REW	GAST/SPCR MT	NC
	Z	ROCKY MOUNT	NC
	JMT	MYRTLE BEACH	SC
	ZYX	COLUMBIA	TN
	GMV	MEMPHIS	TN
	EAJ	OAK RIDGE	TN
	DE	COLLINSVILLE	VA
	VI	CULPEPER	VA
	DKM	BRIDGEPORT	WV
7.735/7.135	BZJ	DALTON	GA
	FRM	MILLEDGEVILLE	GA
	Y	VALDOSTA	GA
	LRQ	PETAL	MS
	GBH	BREVARD	NC
	GN	WILMINGTON	NC
	ABW	CHERAW	SC
	EDS	ALAMO	TN
	AZJ	PEARISBURG	VA
	HB	RICHMOND	VA
7.75 /7.15	TFW	ALBANY	GA
	BYK	CUMMING/SAWNEE	GA
	HKK	JACNITO	MS
	IZ	PEARL/RANKIN CO	MS
	VLY	MORGANTON	NC
	TQD	RALEIGH	NC
	BJM	MONCKS CORNER	SC
	SDT	SIMPSONVILLE	SC
	CD	NASHVILLE	TN
	EAJ	OAK RIDGE	TN

	QJZ	JEWELL RIDGE	VA
	SVR	ST ALBANS	WV
7.765/7.165	KIN	FORSYTH	GA
	HBM	LEXINGTON	KY
	UBY	PRESTONSBURG	KY
	RIS	HIGH POINT	NC
	VIA	GREENWOOD	SC
	BRV	ERWIN/UNICOI CO	TN
	CEX	PURYEAR	TN
	CTF	NEWPORT NEWS	VA
	N	WARRENTON	VA
	K	WESTON	WV
7.78 /7.18	BMA	AUGUSTA	GA
	NHW	BALDWIN	GA
	BDP	WARNER ROBINS	GA
	H	BAXTER	KY
	CN	LOUISVILLE	KY
	UDQ	INVERNESS	MS
	EJJ	SANFORD	NC
	SFK	TRYON/MELROSE MT	NC
	CTJ	WILMINGTON	NC
	NAT	DORCHESTER	SC
	SC	FT MILL/CAROWND	SC
	DES	CLEVELAND	TN
	KOG	MEMPHIS	TN
	ZGA	NASHVILLE	TN
	YKV	AMELIA COURTHSE	VA
	Z	PKS KB/PULASKI	VA
	OHX	LEON	WV
7.795/7.195	JPD	ATLANTA	GA
	UCJ	BOSTON	GA
	NIN	LENOIR	NC
	WB	MURPHY	NC
	PNZ	FLORENCE	SC
	AZQ	KNOXVILLE	TN
	RTS	LYNCHBURG	VA
	ELM	SMITHFIELD	VA
	H	HORSEPEN MT	WV
7.81 /7.21	EMM	CONYERS	GA
	TO	SAVANNAH	GA
	HY	OWENSBORO	KY
	BUZ	GREENSBORO	NC
	MSD	WHITEVILLE	NC
	AVU	LITTLE MT.	SC
	WS	COOKEVILLE	TN
	SBX	GRAY/HOLSTON MT	TN
	WKZ	JACKSON	TN
	IWG	MCLEAN	VA
	NJH	AMBER RIDGE	WV
	FMD	CLARKSBURG	WV
7.825/7.225	ZUN	COMMERCE	GA
	LVY	SUMMERVILLE	GA
	NFK	LITCHFIELD	KY
	OXA	ESCATAWPA	MS
	DRL	WARSAW	MS
	OOC	ASHEVILLE	NC
	WTX	HILLSBOROUGH	NC
	DTW	SANTEE	SC
	OAH	MORRISTOWN	TN
	VXR	HAMPTON	VA
	RAG	HARRISONBURG	VA
	NRK	PRINCETON	WV
7.84 /7.24	NFG	IRWINTON	GA
	DII	ASHLAND	KY
	AVE	FAIR DEALING	KY
	AI	FRANKFORT	KY
	NAR	MAYFIELD	KY
	R	TUPELO	MS
	NIW	CARTHAGE	NC
	PBG	FOREST CITY	NC
	GHZ	FRANKLIN	NC
	ILN	HILTON HEAD	SC
	VT	LANCASTER	SC
	BKY	GALLATIN	TN
	OG	LUNENBURG CT.HSE	VA
	FQR	WOODBRIDGE	VA
	T	WYTHEVL/SAND MTN	VA
7.855/7.255	KDT	ATLANTA	GA
	IOX	DIXON	KY
	CO	HIGHLAND HEIGHTS	KY
	RC	LAUREL	MS
	AV	ASHEBORO	NC
	KNI	HENDSVL/PENIC/MT	NC
	BZU	NASHVILLE	TN
	SI	PETROS/FRZ HD MT	TN
	TVS	ACCOMAC	VA
	CYZ	DANTE	VA
	EQC	HINTON	WV
	YZV	MARTINSBURG	WV
	LLM	PARKERSBURG	WV
7.87 /7.27	EBB	AMERICUS	GA
	KMS	COVINGTON	GA
	KWT	LOUISVILLE	KY
	USN	ABERDEEN	MS
	SXK	VICKSBURG	MS
	H	RALEIGH BENSON	NC
	SM	WAYNESVILLE	NC
	LET	CHARLESTON	SC
	JRJ	SENECA/LONG MT	SC
	YQC	GALLATIN	TN
	FH	JOHNSON CITY	TN
	TMC	PINSON	TN
	IKL	GUM SPRING	VA
	QWO	ROANOKE/POOR MTN	VA
	S	SCOTT DEPOT	WV
7.885/7.285	LYV	#ASHBURN/TIFTON	GA
	VBX	ATLANTA/GPCO	GA
	ZFH	LONDON	KY
	FGA	MARION	KY
	EZN	COLUMBIA	MS
	CTS	CORINTH	MS
	ADM	AIKEN	SC
	DCD	MYB BCH/BRKSVIL	SC
	MGM	WHITE OAK MTN	SC
	ZTK	BLUFF CITY	TN
	PUX	PIKEVILLE	TN
	QT	#RIDGEWAY	VA
	HON	SPRUCE KNOB	WV
7.90 /7.30	MU	PERRY	GA
	YSV	ROME	GA
	ICN	ALLEN	KY
	SJH	SPRINGFIELD	KY
	LNY	MAGEE	MS
	YJG	JEFFERSON	NC
	MZP	RED SPRINGS	NC
	OMV	TUCKASEGEE	NC
	ESG	AWENDAW	SC
	BBB	KNOXVILLE	TN
	ADT	MEMPHIS	TN
	ZSA	NASHVILLE	TN
	TSC	BLUEMONT	VA
	SPS	#FRANKLIN	VA
	ZR	LEXINGTON	VA
	SL	HARRISVL/PENSBRO	WV
7.915/7.315	REB	TWIN CITY	GA
	IL	SALEM	KY
	JYH	SAURATOWN MT	NC
	PPD	SHALLOTTE	NC
	UZT	N. SPARTANBURG	SC
	HZN	ROGERSVILLE	TN
	HFH	ALEXANDRIA	VA
	HWQ	GRUNDY	VA
	YET	HARRISONBURG	VA
7.93 /7.33	BXO	LAGRANGE	GA
	DIP	TOCCOA	GA
	KWH	ASHLAND	KY
	KNE	MT. STERLING	KY
	IUI	PROVIDENCE	KY
	CYR	MCHENRY	MS
	EPP	PHILADELPHIA	MS
	LPL	FAYVLLE/FT BRAGG	NC
	K	LENOIR/HIBRITN	NC
	NUY	COLUMBIA	SC
	VXW	COVINGTON	TN
	ORB	MORGAN COUNTY	TN
	ZR	LEXNGTN/ROCK MT.	VA
	ZIP	WARSAW	VA
7.945/7.345	NEQ	ATLANTA/MARIETTA	GA
	PJR	JESUP/SCREVEN	GA
	IZD	LYNCH/BLACK MT	KY
	JC	CLINTON	MS
	NYR	SHELBY	NC
	TEP	WASHINGTON	NC
	VH	HENDERSONVILLE	TN
	L	ABINGDON	VA
	TN	GLADYS	A
	ZBF	YORKTOWN	VA
	RUA	FRANKLIN	WV
	K	LOGAN/SUMERCO	WV
7.96 /7.36	CLC	DOUGLASVILLE	GA
	HZX	DUBLIN	GA
	Z	LOUISVILLE	KY
	CJR	HATTIESBURG	MS
	PKU	LOUISVILLE	MS
	SVC	NATCHEZ	MS
	KDB	BOONE/RICH MTN	NC
	LDB	DURHAM	NC
	S	LUMBERTON	NC
	EOY	COLUMBIA	SC
	OAK	LAFOLLETTE	TN
	NTM	NASHVILLE	TN
	KLX	PARIS	TN
	CBB	CHESTERFIELD	VA
	OLM	STUARTS DRAFT	VA
7.975/7.375	TQU	ATHENS/CRAWFORD	GA
	VAK	LAFAYETTE	GA
	CO	WALTON	KY
	VFU	GULFPORT	MS
	YN	BURNSVILLE	NC
	ROK	GREENVILLE	NC
	DCD	TABOR CITY	NC
	DMI	GEORGETOWN	SC
	LEO	GREENVILLE	SC
	HL	#DICKSON	TN
	ILD	LYNCHBURG	VA
	NV	VIRGINIA BEACH	VA
	LNB	GRAFTON	WV
	WMX	ST ALBANS	WV
7.98 /7.38	NAY	PONTOTOC	MS
7.99 /7.39	IMK	THOMASTON	GA
	NON	COVINGTON	KY
	RBL	LA GRANGE	KY
	PDJ	#WHTSBRG/PINE MT	KY
	UNA	PRENTISS	MS
	CHZ	AQUADALE	NC
	PLY	CHARLOTTE	NC
	IUY	CLAYTON	NC
	QBG	EDEN/STONEVILLE	NC
	FAU	SHALLOTTE	NC
	FEC	LEXINGTON	SC
	TA	CLARKSVILLE	TN
	PHT	DAYTON/RHEA CTY	TN
	BJY	OAKFIELD	TN
	AJO	MADISON	VA
	ARO	PETERSBURG	VA
	D	LEWISBURG	WV
	CRW	PARKERSBURG	WV
6.19 /7.51	HBY	MEMPHIS	TN
7.075/7.675	NGQ	FRANKFORT	KY
7.315/7.915	STJ	#FORSYTH	GA
6.46 /1.00	EHJ	BARBOURSVILLE	WV

220 MHZ

4.26 /2.66	DBB	BEDFD/APL ORCH	VA
2.12 /3.72	KHP	STERLING	VA
2.14 /3.74	VMI	LEXINGTON	KY
2.18 /3.78	OHX	#LEON	WV
2.30 /3.90	RAB	HERMITAGE	TN
2.32 /3.92	UXD	AUGUSTA	KY
2.34 /3.94	QK	ASHLAND	KY
	GP	CLARKSVILLE	TN
	ZJM	MEMPHIS	TN
	HTA	VIENNA	VA
2.38 /3.98	HUV	LINWOOD	NC
	ZSA	GALLATIN	TN
2.42 /4.02	JEH	#CONYERS	GA
	EHF	FAYETTEVILLE	NC
	TXE	LEESBURG	VA
2.46 /4.06	NYR	SHELBY	NC
	MB	ARLINGTON	VA
2.48 /4.08	NTM	NASHVILLE	TN
2.50 /4.10	F	BALDWIN	GA
	YHD	FAIRFAX	VA
	DBB	ROANOKE	VA
2.52 /4.12	NFP	ATLANTA/MARIETTA	GA
	BEC	BALD CREEK	NC
	G	FLAT TOP/WINTRPL	WV
2.54 /4.14	WOR	GREENSBORO	NC
	QHF	PICKENS/CSRS HD	SC
	SGS	FRANKLIN	TN
	YQC	CHARLOTTESVILLE	VA
	M	#WILLIAMSON	WV
2.56 /4.16	JNN	SASAFRAS MTN	GA
	K	LENOIR/HIBRITN	NC
	S	NASHVILLE	TN
2.58 /4.18	GLC	BRUNSWICK	GA
	YDX	DALLAS	GA
	NRL	CHARLESTON	SC
2.60 /4.20	OVY	ATLANTA-NE	GA
	UA	AUGUSTA	GA
	GN	WILMINGTON	NC
	ILY	GREENVILLE	SC
	KMG	BLOUNTVILLE	TN
	YTU	BROWNSVILLE	TN
	PEA	HAMPDEN-SYDNEY	VA
2.62 /4.22	QP	VERSAILLES	KY
	C	ROCKY MOUNT	NC
	FZK	KNXVL/CROSS MT	TN
	BN	SPRINGFIELD	TN
2.64 /4.24	YYD	ELLIJAY-BUCK MTN	GA
	KNI	HENDSVL/BERWLW M.	NC
2.66 /4.26	L	MARIETTA	GA
	BVW	ASHVL/MT PISGAH	NC
	WTX	HILLSBOROUGH	NC
	NP	SHORT MTN	TN
2.68 /4.28	BLR	ATLANTA	GA
	OAK	LAFOLLETTE	TN
	M	LYNCHBURG	VA
2.70 /4.30	NYV	TEMPLE	GA
	MKT	LOUISVILLE	KY
	AI	SOMERSET	KY
	PVI	STATESVILLE	NC
2.72 /4.32	MTA	ACWORTH	GA
	JBF	THOMASVILLE	GA
	WA	PASCAGOULA	MS
	WGA	JACKSONVILLE	NC
	X	PICKENS/SASFR MT	SC
	US	CLEVELAND	TN
2.74 /4.34	DOC	ATLANTA	GA
	AZA	THOMASVILLE	NC
	CVL	MANASSAS	VA
2.76 /4.36	BZJ	DALTON	GA
	PAC	GRIMESLAND	NC
	TYO	MARSHALL	NC
	ZOE	NASHVILLE	TN
	YST	CHARLESTON	WV
2.78 /4.38	RBT	CLEVELAND	GA
	OQJ	KNOXVILLE	TN
	QT	DANVILLE	VA
2.80 /4.40	DWU	ELLISVILLE	MS
	BFB	CHARLOTTE	NC
	QHF	PICKENS	SC
	YGI	COLLIERVILLE	TN
	RBB	MORRISTOWN	TN
2.82 /4.42	YSV	ROME	GA
	AO	LEXINGTON	KY
	VEZ	#LOUISVILLE	KY
	BS	MEMPHIS	TN
	DE	COLLINSVILLE	VA
	GSM	NORTON/HIGH KNOB	VA
	KHP	TYSONS CORNER	VA
2.84 /4.44	NEQ	ATL/MARIETTA	GA
	IEV	SPINDALE	NC
	CW	WEST SPRINGS	SC
	OG	NASHVILLE	TN
	FUV	SEVIERVILLE	TN
	GLA	DANVLE/WHITE OAK	VA
2.86 /4.46	HT	#CALHOUN	GA
	Y	VALDOSTA	GA
	ZTJ	SHELBY	NC
	YON	KNOXVILLE	TN
	FUJ	LOVETTSVILLE	VA
2.88 /4.48	PRH	NORCROSS	GA
	ZIA	LOCUST	NC
	ZGA	NASHVILLE	TN
2.90 /4.50	MTA	MARIETTA	GA
	TYP	BILOXI	MS
	YNY	WILMINGTON	NC
	BBB	KNOXVILLE	TN
	DRL	MEM/FISHERVILLE	TN
	BVI	MARTINSVILLE	VA
2.92 /4.52	KSM	WALESKA/PNLGMT	GA
	RWN	LITTLE MTN	SC
	OBW	JONESBOROUGH	TN
	ONG	RICHMOND	VA
3.92 /4.52	RPB	GLEN	MS
2.94 /4.54	YEA	DALLAS	GA
	BVW	MT MITCHELL	NC
2.96 /4.56	DOC	ATLANTA	GA
	RXF	LANCASTER	KY
	EHF	FAYETTEVILLE	NC
	ARY	BLF/ONEIDA PK	VA
2.98 /4.58	F	PIKEVILLE	KY
	FKC	ROCKY MOUNT	NC
	YHH	SAURATOWN MT	NC
	VFD	CROSS	SC
	KFI	KNOXVILLE	TN
3.00 /4.60	GIS	CARTERSVILLE	GA
	N	ASHEVILLE	NC
	NNR	HIGH POINT	NC
	HMT	LAKE GASTON	VA
3.02 /4.62	ZTL	ATLANTA/BELL	GA
	DAR	PIKEVILLE	KY
	THN	GLOUCESTER PT.	VA
3.04 /4.64	ABZ	RINGGOLD	GA
	PEN	RALEIGH	NC
	YHH	WINSTON-SALEM	NC
	SWI	COLUMBIA	SC
	RGQ	CLINCH MTN	TN
3.06 /4.66	BKM	MACON	GA
	PLA	MARS HILL	NC
	AM	SUNSET BEACH	NC
	VFR	SUMTER/SHAW	SC
	S	NASHVILLE	TN
	FPM	MANASSAS	VA
3.08 /4.68	BZJ	DALTON	GA
	KPF	LK NORMN/CLT	NC
3.10 /4.70	PZD	HIRAM	GA
	RXG	SAURATOWN MT	NC
	IBW	KNOXVILLE	TN
	ARO	PETERSBURG	VA
3.12 /4.72	MBK	CLAYTON	GA
	DAN	TRENTON	NC
	KO	COLUMBIA	TN
	KHP	TYSONS CORNER	VA
3.14 /4.74	KVC	DALTON	GA
	TFU	ASHEVILLE	NC
	UO	OXFORD	NC
	PYI	NASHVILLE	TN
	RAG	STAUNTON	VA
	WQJ	VIRGINIA BEACH	VA
3.16 /4.76	BOC	STONE MT	GA
	EXU	SALISBURY	NC
	E	GREENBRIER	TN
	TFZ	CHARLOTTESVILLE	VA
3.18 /4.78	KLW	ROCKMART	GA
	D	ACKERMAN	MS
	WGY	EDEN	NC
	BR	ORANGEBURG	SC
	VCM	CHATTANOOGA	TN
	UCI	JC/BUFFALO MT	TN
	KOG	MEMPHIS	TN
	GJZ	WOODBRIDGE	VA
3.20 /4.80	PML	MORGANTON	NC
	E	GREENBRIAR	TN
3.22 /4.82	C	ATLANTA	GA
	MOP	LOUISVILLE	KY
	D	ACKERMAN	MS
	HTS	ARCHDALE	NC
	DWU	CANTON	NC
	CCF	ALEXANDRIA	VA
	SAD	SINGERS GLEN	VA
3.24 /4.84	MU	PERRY	GA
	DAN	GRIFTON	NC
	PLV	BEDFORD	VA
3.26 /4.86	JNN	ALPHARETTA	GA
	GYR	SUMTER	SC
	PVT	HAMPTON	VA
3.28 /4.88	UPC	YORKVILLE	GA
	AI	SOMERSET	KY
	VNO	BAY ST. LOUIS	MS
	AIH	ANDREWS/ROBBINSV	NC
	RXG	SAURATOWN MT	NC
	DRL	FISHERVILLE	TN
3.30 /4.90	QPL	MARIETTA	GA
	ST	PONTOTOC	MS
	EOY	COLUMBIA	SC
	ZOK	CHATT/SIGNAL MT	TN
	SBX	GRAY/HOLSTON MTN	TN
	HQ	DELTAVILLE	VA
3.32 /4.92	IFL	RALEIGH	NC
	NYK	ROPER MT/GRNVL	SC
	LGA	BLFD/E.RIVER MTN	VA
3.34 /4.94	KXO	AUGUSTA	GA
	EV	ROSSVILLE	GA
	YUU	LEXINGTON	KY
	JJ	FLORENCE	SC
	NKM	GREENEVILLE	TN
	PCD	NASHVILLE	TN
	EM	ROANOKE/CHAUS MT.	VA
3.36 /4.96	ZJG	HIRAM	GA
	JTX	CHERRYVILLE	NC
	CH	GOLDSBORO	NC
	UQS	HENDERSONVILLE	NC
	WTB	SAURATOWN MT	NC
	TUN	AIKEN	SC
	RA	LAVERGNE	TN
3.38 /4.98	JSR	CUMMING	GA
	PNG	JARVIS	KY
	CHP	FALLS CHURCH	VA

440 MHZ

9.45 /5.67	DOC	ATLANTA	GA
4.00 /1.25	ZTL	#ATLANTA/BELL	GA
9.25 /1.25	PXX	BRNSWK/JEKYLL IS	GA
	PPN	CHARLOTTE	NC
	AZA	SAURATOWN MT	NC
	GUP	LEXINGTON	SC
	ERU	MEMPHIS	TN
	ZQ	NASHVILLE	TN
9.250/1.250	NS	ELIZABETHTOWN	KY
	TPI	PULASKI	TN
9.25 /3.25	UMU	SUMTER	SC
	VHP	SAVANNAH	GA
	HTB	BOWLING GREEN	KY
	NOJ	GAUTIER	MS
	NOJ	WAYNESBORO	VA
	MM	ALBANY	GA
	AOH	OWENSBORO	KY
	NYR	SHELBY	NC
1.25 /4.00	EM	MEMPHIS	TN
6.25 /9.25	GVK	ALEXANDRIA	VA
	FHL	ROANOKE/POOR MT.	VA
7.00 /2.00	RTH	ALPHARETTA	GA
	ORL	LOUISVILLE	KY
	KPW	#MARSHALL	NC
	HMT	GASBURG	VA
	CSG	WINCHESTER	VA
	T	WYTHEVILLE	VA
7.05 /2.05	XV	JASPER	TN
	BJY	MEDINA	TN
7.075/2.075	VOS	STANTON	KY
	J	LONE MOUNTAIN	TN
7.10 /2.10	ABJ	MILAN	TN
	TXE	STERLING	VA
7.125/2.125	PLP	ROSSVILLE	GA

7.15 /2.15	QO	DUNWOODY	GA
	BEA	RALEIGH	NC
	J	CHATTANOOGA	TN
7.150/2.150	TPI	PULASKI	TN
7.175/2.175	BZJ	#DALTON	GA
	EO	ROCKY FACE	GA
	YUY	ROANOKE	VA
7.20 /2.20	APR	DECATUR	GA
	GN	WILMINGTON	NC
	YCR	BETHPAGE	TN
	SBX	GRAY/HOLSTON MT	TN
	BJY	OAKFIELD	TN
	TXE	STERLING	VA
7.225/2.225	DYH	LOUISVILLE	KY
	GUG	GREENSBORO	NC
7.25 /2.25	PQA	GREENVILLE	SC
	DES	CLEVELAND	TN
	HTI	COVINGTON	VA
7.275/2.275	VTT	MACON	GA
	ZCM	AUBURN	NC
7.30 /2.30	NOG	DULUTH	GA
	VFD	CROSS	SC
	UBR	COOKEVILLE	TN
	VDZ	RICHMOND	VA
	BS	BECKLEY/BOLT	WV
7.325/2.325	JSR	CHATTANOOGA	TN
7.35 /2.35	NHW	BALDWIN	GA
7.375/2.375	PXV	WEST JEFFERSON	NC
7.40 /2.40	UER	WARM SPRINGS	GA
	XV	LATONIA	KY
	QHF	PICKENS/CSRS HD	SC
	SSB	MONTEAGLE	TN
	YI	LYNCHBG/JACK MT.	VA
7.425/2.425	HCA	CLARKESVILLE	GA
	FIE	MADISONVILLE	KY
7.45 /2.45	RBL	LOUISVILLE AREA	KY
	LMR	RALEIGH	NC
	NEB	CLEVELAND	TN
7.475/2.475	NVG	LAVONIA	GA
7.50 /2.50	RYM	LOUISVILLE	KY
	SSB	HENDERSONVILLE	TN
	NTZ	KNOXVILLE	TN
	CA	ROANOKE/POOR MT	VA
7.500/2.500	YNY	WILMINGTON	NC
7.55 /2.55	JEH	CONYERS	GA
	MMY	PITTSBORO	NC
7.60 /2.60	USU	MURPHY	NC
	SSB	GALLATIN	TN
	VA	#HUNTINGTON	WV
7.625/2.625	NSO	GAINESVILLE	GA
	AM	SUNSET BEACH	NC
	EPG	MEMPHIS	TN
7.675/2.675	UP	LAWRENCEBURG	TN
7.70 /2.70	HHH	ELLIJAY	GA
	AZU	SAVANNAH	GA
	SSB	GORDONSVILLE	TN
	VG	ROANOKE/POOR MT.	VA
7.725/2.725	NMF	ATLANTA/SWEAT MT	GA
	YJ	LOUISVILLE	KY
7.75 /2.75	EMM	#CONYERS	GA
	GR	BAKERSVILLE	NC
7.775/2.775	EBZ	MADISONVILLE	KY
7.80 /2.80	AAD	YADKINVILLE	NC
	EPG	JACKSON	TN
	MIC	GUM SPRING	VA
7.825/2.825	G	MEMPHIS	TN
7.875/2.875	IWK	MACON	GA
7.90 /2.90	AZA	THOMASVILLE	NC
	BNW	MULLOY	TN
7.925/2.925	YHM	EATONTON	GA
7.95 /2.95	FU	LYNCHBURG	VA
7.975/2.975	YNZ	ATLANTA	GA
8.00 /3.00	OGF	CHATSWORTH	GA
	YP	#GOLDSBORO	NC
	KPW	#MARSHALL	NC
	EOY	COLUMBIA	SC
	ZJM	MEMPHIS	TN
	X	WHITETOP MTN	VA
	EZR	HUNTINGTON	WV
8.80 /3.00	KOG	MEMPHIS	TN
8.025/3.025	DZ	BURLINGTON	NC
8.05 /3.05	CH	GOLDSBORO	NC
	PUB	MT JULIET	TN
8.075/3.075	UAG	KNXVL/CROSS MTN	TN
8.10 /3.10	IZD	LYNCH/BLACK MT	KY
	GGC	SAURATOWN MT	NC
	GPM	FAYETTEVILLE	TN
	JXT	MEMPHIS	TN
	ADW	POWHATAN	VA
	LJZ	WOODBRIDGE	VA
	FHE	BUCKHANNON	WV
8.125/3.125	DEB	HAMPTON	GA
8.15 /3.15	QO	DUNWOODY	GA
	HG	SALISBURY	NC
	MHR	ST. ALBANS	WV
8.175/3.175	ARO	GREENBAY	VA
8.20 /3.20	APP	HIGH HOUSE MTN	GA
	ZIA	#HAMLET	NC
	UG	GRNVLE/VIKING MT	TN
	BS	MEMPHIS	TN
8.225/3.225	QCP	JONESBORO	GA
	ZCM	RALEIGH	NC
8.25 /3.25	VF	DORTON	KY
	JEX	KANNAPOLIS	NC
8.275/3.275	KLW	ROCKMART	GA
8.30 /3.30	X	ATHENS	GA
	SVQ	ARCHDALE	NC
	IEV	SPINDALE	NC
	KJH	GATLBG/COVE MT	TN
8.325/3.325	JMD	STOCKBRIDGE	GA
	JMD	STOCKBRIDGE	GA
8.35 /3.35	YYD	ELLIJAY-BUCK MTN	GA
	N	GRNVLE/PARIS MT	SC
	LFU	RICHMOND	VA
8.375/3.375	AQS	CALHOUN/JASPER	GA
	IFL	RALEIGH	NC
8.40 /3.40	RDM	HAMPTON	GA
	WTB	SAURATOWN MT	NC
	RPC	YAUPON BEACH	NC
	TUN	AIKEN	SC
	DBJ	CUMBERLAND CITY	TN
	QWW	MEMPHIS	TN
8.425/3.425	CPO	BRUNSWICK	GA
	MDE	JASPER	GA
	SQC	JOHNSON CITY/HMV	TN
8.45 /3.45	VAK	HIGH PT/LOOKT MT	GA
	VOZ	STATESVILLE	NC
8.475/3.475	X	CHAPEL HILL	NC
8.50 /3.50	EQC	LOUISVILLE	KY
	UBY	META	KY
	X	LAUREL	MS
	PQZ	GREENSBORO	NC
	WKS	PARIS/GROVE HL	TN
	FI	TYSONS CORNER	VA
8.500/3.50	BQX	MARIETTA	GA
8.525/3.525	KLW	ROCKMART	GA
8.55 /3.55	IN	DACULA	GA
	LRQ	HATTIESBURG	MS
	XE	ROARING GAP	NC
	ELM	SMITHFIELD	VA
8.575/3.575	PXV	BOONE/RICH MTN	NC
8.60 /3.60	BA	MARIETTA	GA
	HYE	MENDENHALL	MS
	DWU	MT MITCHELL	NC
	CXD	FOREST	VA
8.625/3.625	MJN	JAMESTOWN	TN
	E	#ONEIDA PEAK/BLF	VA
8.65 /3.65	ZV	ATLANTA	GA
	D	ACKERMAN	MS
	AIH	ANDREWS/ROBBINSV	NC
	UMI	HAMPTON	VA
	BON	ROANOKE/POOR MT.	VA
8.675/3.675	IBW	KNOXVILLE	TN
8.70 /3.70	BA	MARIETTA	GA
	LXW	HIGH POINT	NC
	LBT	LOCUST	NC
	DOR	BARTLETT	TN
8.725/3.725	OTT	CARTHAGE	TN
8.75 /3.75	TF	COVINGTON	GA
	YOT	#GASTONIA/CROWDE	NC
	EDS	ALAMO	TN
	EG	#ROANOKE AIRPORT	VA
8.775/3.775	QP	VERSAILLES	KY
	JFN	HAW RIVER	NC
	CWY	LAURENS	SC
8.80 /3.80	NFP	ATLANTA/MARIETTA	GA
	IAT	NATCHEZ	MS
	HNK	SUMMERVILLE	SC
	CWB	SEYMOUR	TN
	NDH	CHESAPEAKE	VA
	VA	INDEPENDNCE HILL	VA
8.825/3.825	KRM	SHELBYVILLE	TN
	KZI	PETERSBURG	VA
8.85 /3.85	YSV	WALESKA/PNLOG MT	GA
	ULM	FRANKLIN	TN
	OB	STAFFORD	VA
8.875/3.875	LXT	ATLANTA	GA
	MZ	HAW RIVER	NC
	DUM	WILLIS	VA
8.90 /3.90	DEB	GRIFFIN	GA
	DWU	ELLISVILLE	MS
	JIF	HIGH POINT	NC
	EVG	CHESAPEAKE	VA
8.925/3.925	LJU	RINGGOLD	GA
	YR	SOUTH BOSTON	VA
8.95 /3.95	UFM	DECATUR	GA
	RYF	MEMPHIS	TN
	NTG	WILLIAMSBURG	VA
8.975/3.975	WGY	EDEN	NC
	BRN	MEMPHIS	TN
	WJS	ROCKWOOD	TN
	RA	SMRYNA	TN
	FIP	WESTON	WV
9.00 /4.00	QDX	LAWRENCEVILLE	GA
	AFY	SAVANNAH	GA
	II	JACKSON	MS
	JEQ	HICKORY	NC
	WAA	#ROCKY MT	NC
	YP	SELMA	NC
	JJ	FLORENCE	SC
	BKY	GALLATIN	TN
	ETE	MEMPHIS	TN
	CWB	SEVIERVILLE	TN
	SN	PORTSMOUTH	VA
	IT	MULLENS/HRNDN MT	WV
9.025/4.025	MSE	STONE MT	GA
	NCJ	LEVEL CROSS	NC
	RDK	MEMPHIS	TN
9.05 /4.05	NEQ	ATLANTA/MARIETTA	GA
	OLC	TAYLORSVL/BARR M	NC
	OG	NASHVILLE	TN
	AVA	GREAT FALLS	VA
	OLM	STUARTS DRAFT	VA
9.075/4.075	PDQ	MARYVILLE	TN
9.10 /4.10	BKM	MACON	GA
	MNI	BOWLING GREEN	KY
	WTT	LOUISVILLE	KY
	WUX	MERIDIAN	MS
	WTX	DURHAM	NC
	MZL	LANCASTER	SC
	AM	CHATTANOOGA	TN
	JXT	MEMPHIS	TN
	FOZ	STAUNTON/EL KNOB	VA
	LFS	WILLIAMSBURG	VA
9.125/4.125	YOQ	BOSTIC	NC
	ECD	LAFAYETTE	TN
9.15 /4.15	ZTL	ATLANTA/BELL	GA
	BJT	CLERMONT HARBOR	MS
	YCR	NEW ALBANY	MS
	IZF	GASTONIA	NC
	NTM	NASHVILLE	TN
	MB	ARLINGTON	VA
	ZR	LEXNGTN/ROCK MT.	VA
9.175/4.175	QOW	COVINGTON	GA
	COV	UNION	KY
	NNN	KNOXVILLE	TN
	WTB	STUART/SPOON MTN	VA
	FMD	CLARKSBURG	WV
9.20 /4.20	LBM	DECATUR	GA
	E	OAK LEVEL	KY
	YNF	AHOSKIE	NC
	GN	WILMINGTON	NC
	GYM	#WEST COLUMBIA	SC
	YTU	BROWNSVILLE	TN
	NEX	MORRISTOWN	TN
	ECM	ENON	VA
	EZA	WAYNESBORO	VA
9.225/4.225	VWK	YANCEYVILLE	NC
	ARK	NASHVILLE	TN
9.25 /4.25	BOC	ATLANTA/STONE MT	GA
	DC	GLASGOW/CVCTY	KY
	CYR	GULFPORT	MS
	KNI	HENDSVL/BERWLW M	NC
	BFI	SMITHFIELD	NC
	PAJ	BARTLETT	TN
	E	GREENBRIER	TN
	TFZ	CHARLOTTESVILLE	VA
9.275/4.275	VTT	MACON	GA
	NC	WINSTON-SALEM	NC
	GZX	CLEVELAND	TN
	AXH	LEBANON	TN
9.30 /4.30	WH	JENKINS	KY
	ZZD	LOUISVILLE	KY
	WOR	GREENSBORO	NC
	MNH	CHARLESTON	SC
	DRL	FISHERVILLE	TN
	GBI	KNOXVILLE	TN
	BZU	NASHVILLE	TN
9.325/4.325	BA	MARIETTA	GA
	BZU	CLARKSVILLE	TN
	T	WYTHEVILLE/SAND	VA
	ZXP	GLENVILLE	WV
9.35 /4.35	Y	VALDOSTA	GA
	CO	HIGHLAND HEIGHTS	KY
	V	GIBSONVILLE	NC
	BKY	GALLATIN	TN
	DBB	BEDFD/APL ORCH	VA
9.375/4.375	IZF	JASPER	GA
	OWU	FANCY GAP	VA
9.40 /4.40	UA	AUGUSTA	GA
	ULJ	HAMILTON	GA
	LU	LAWRENCEVILLE	GA
	LTW	MERIDIAN	MS
	YZF	FAYETTEVILLE	NC
	YOQ	FOREST CITY	NC
	KOG	MEMPHIS	TN
	EAJ	OAK RIDGE	TN
	OMC	DANVILLE	VA
	HON	MADISON	VA
	ARO	PETERSBURG	VA
	G	ALDERSON	WV
9.90 /4.40	DEP	AUDRA PARK	WV
9.425/4.425	ISI	ALTAVISTA	VA
9.45 /4.45	DOC	ATLANTA	GA
	LCL	JACKSON	MS
	CQ	CHARLOTTE	NC
	YTU	BROWNSVILLE	TN
	KWP	GALLATIN	TN
	J	SODDY DAISY	TN
	MOP	BLUEFIELD	VA
	ZOA	FALLS CHURCH	VA
	MOP	BLUEFIELD	WV
9.475/4.475	CLA	SWEAT MT/MARIETT	GA
9.50 /4.50	MM	ALBANY	GA
	UWL	ATLANTA	GA
	APA	HENDERSON	KY
	MOP	LOUISVILLE	KY
	ICX	LEXINGTON	NC
	GYR	SUMTER	SC
	LSP	BRISTOL/HLST MT	TN
	KSL	KNOXVILLE	TN
	HEX	LYNCHBURG/TOBRMT	VA
	Y	BUCKHANNON	WV
9.525/4.525	VF	GRETHEL	KY
	MRS	NEW HEBRON	MS
	PEN	RALEIGH	NC
	DCD	MYB BCH/BRKSVIL	SC
	PYI	SMITHVILLE	TN
9.55 /4.55	JEH	CONYERS	GA
	KQ	LEWISPORT	KY
	VTE	GASTONIA	NC
	VM	ROANOKE RAPIDS	NC
	Y	COOKEVILLE	TN
	O	MCNAIRY	TN
	OGT	HAMPTON	VA
9.575/4.575	AQG	DOUGLASVILLE	GA
	MVY	PHELPS	KY
	D	SALISBURY	NC
	WCK	NASHVILLE	TN
	DE	COLLINSVILLE	VA
9.60 /4.60	KMS	COVINGTON	GA
	NMC	LOUISVILLE	KY
	CO	CLINTON	MS
	BFB	CHARLOTTE	NC
	UO	OXFORD	NC
	UDD	NORTH CHARLESTON	SC
	HAP	KNOXVILL/ENG MTN	TN
	JXI	MEMPHIS	TN
	SAD	SINGERS GLEN	VA
	K	WESTON	WV
9.625/4.625	WQ	ATLANTA	GA
	QFL	HAWESVILLE	KY
	ZCD	HICKORY FLAT	MS
	OCF	RICHTON	MS
	DVN	LUMBERTON	NC
	TK	NASHVILLE	TN
	E	BLUEFIELD	VA
9.65 /4.65	IBW	SMYRNA	GA
	KOL	BOWLING GREEN	KY
	ST	HORN LAKE	MS
	J	MIDDLESEX	NC
	MME	SALISBURY	NC
	NKM	GREENEVILLE	TN
	MWQ	#MCMINNVILLE/HF	TN
	OYS	SHORT MTN	TN
	ARO	RICHMOND-ASHLAND	VA
9.675/4.675	EBZ	NEWNAN	GA
	VYX	PIKEVILLE	KY
	DIL	CHARLOTTE	NC
	WGA	JACKSONVILLE	NC
	JMT	MYR BCH/CONWAY	SC
	PCD	NASHVILLE	TN
	MIZ	NORFOLK	VA
9.70 /4.70	LUQ	DALLAS	GA
	ELN	VALDOSTA	GA
	AUN	LOUISVILLE	KY
	Y	JACKSON	MS
	YMY	DENVER/CLT	NC
	JEH	ROCKY MOUNT	NC
	WWB	GATE CITY	VA
	LG	MORGANTOWN	WV
9.725/4.725	NFA	WATKINSVILLE	GA
	QDK	WINSTON-SALEM	NC
	RAV	BLUFF CITY	TN
	AKM	FRANKLIN	TN
	FO	KEENY MTN	WV
9.75 /4.75	EMM	CONYERS	GA
	VZF	STARKVILLE	MS
	IZF	#GASTONIA/CROWDE	NC
	TC	HENDERSON	TN
	KQI	FOREST	VA
	BNW	CHARLESTON	WV
9.775/4.775	NEQ	ATLANTA/MARIETTA	GA
	YHH	KING/SAURATOWN M.	NC
	ATC	RALEIGH	NC
	AKM	GALLATIN	TN
	G	PARKERSBURG	WV
9.80 /4.80	ASI	COVINGTON	GA
	BEJ	ELIZABETHTOWN	KY
	J	GREENVILLE	NC
	YEC	REIDSVILLE/EDEN	NC
	RG	GAFFNEY	SC
	JXI	MEMPHIS	TN
	LP	MORRISTOWN	TN
	MIC	OILVILLE	VA
	G	BECKLEY/KINGSTON	WV
	CUL	MORGANTOWN	WV
9.825/4.825	DOC	ATLANTA	GA
	VXR	SALEM	KY
	DSN	AMORY	MS
	UY	MT AIRY/FSH PK	NC
	FC	MEMPHIS/ADAMS MK	TN
	BGK	NASHVILLE	TN
	ZBP	STAUNTON	VA
9.85 /4.85	BZJ	DALTON	GA
	UM	MIDWAY	GA
	YUU	LEXINGTON	KY
	NI	NEBO	KY
	DU	INDIANOLA	MS
	WRE	POPLARVILLE	MS
	CQ	CHARLOTTE	NC
	GMP	WILMINGTON	NC
	NDQ	NORTON/HIGH KNOB	VA
	ARO	RICHMOND	VA
9.875/4.875	ELV	CONYERS	GA
	UPE	SALVISA	KY
	BEC	BALD CREEK	NC
	DW	RALEIGH	NC
	LRD	CHATTANOOGA	TN
	BOX	JACKSON	TN
	AKM	NASHVILLE	TN
	WTP	BIG ''A'' MTN	VA
9.90 /4.90	IVB	CORBIN	KY
	YWH	HIGHLAND HEIGHTS	KY
	D	ACKERMAN	MS
	DWT	ASHEVILLE	NC
	JMS	NEW BERN	NC
	J	WILSON	NC
	MMI	RAMER	TN
	IDG	WATERTOWN	TN
	TOU	FANCY GAP	VA
9.925/4.925	NNO	ATLANTA	GA
	PJR	JESUP	GA
	MKG	ASHLAND	KY
	WZH	GLASGOW	KY
	PYQ	SOUTHAVEN	MS
	TTE	VICKSBURG	MS
	XRY	MT. AIRY	NC
	BUH	ANDERSON/SAS MT	SC
	JMT	GEORGETOWN	SC
	BGK	COLUMBIA	TN
	VIH	DOVER	TN
	CLA	PIGEON FORGE	TN
	BON	ROANOKE/TINKER M	VA
9.95 /4.95	I	AUGUSTA	GA
	MU	PERRY	GA
	EJA	LEXINGTON	KY
	EYM	WINONA	MS
	WXL	DALLAS/CHARLOTTE	NC
	DW	RALEIGH	NC
	PBC	CHARLESTON	SC
	SIR	BENTON/BEAN MT	TN
	GP	CLARKSVILLE	TN
	NNE	MEMPHIS	TN
	WRN	STAUNTON	VA
	KXV	VIRGINIA BEACH	VA
	CQV	SO. CHARLESTON	WV
9.975/4.975	YNZ	ATLANTA	GA
	TVE	BRUNSWICK	GA
	TAT	ASHLAND	KY
	CWF	NICHOLASVILLE	KY
	AGD	JACKSON	MS
	ML	ASHEBORO	NC
	ZTJ	POLKVILLE	NC
	O	ORANGEBURG	SC
	LP	MORRISTOWN	TN
	AKM	NASHVILLE	TN
	AZJ	PEARISBURG	VA
2.10 /7.10	GYM	COLUMBIA	SC
3.85 /8.85	YSV	WALUSKA/PINE LOG	GA
4.60 /9.60	SJH	SPRINGFIELD	KY
4.825/9.825	DOC	ATLANTA	GA
9.25 /2.25	HTB	BOWLING GREEN	KY
6.25 /3.25	HEX	LYNCHBURG	VA
9.25 /0.00	HTB	BOWLING GREEN	KY

SERA REPEATER INDEX LISTINGS BY CITY - BY STATE

GEORGIA REPEATERS

10 METERS

ALBANY	W4MM	29.58	29.68	N	L
ATL/MARIETTA	N4NEQ	29.54	29.64	*	L
DALTON	N4BZJ	29.58	29.68	*	AL

6 METERS

ATL/MARIETTA	N4NEQ	52.09	53.09	*	L
AUGUSTA	K4EDU	52.03	53.03	*	O
CARTERSVILLE	WB4AEG	52.07	53.07	*	PR
#CONYERS	WB4JEH	52.55	51.55	*	UNCOORD.
CONYERS	WB4JEH	52.55	53.55	*	
DALTON	N4BZJ	52.13	53.13	*	
#HIGH HOUSE MTN.	W4VWH	52.45	53.45	*	UNCOORD.
JULIETTE	KC4ZIZ	52.43	53.43	*	
PINE LOG MT	WB4UPC	52.05	53.05	N	L
PINE LOG MT	KE4PN	52.29	53.29	N	L
VALDOSTA	KB0Y	52.89	53.89	*	

2 METERS

ADAIRSVILLE	WD4IWL	146.085	146.685	*	PL
ALBANY	W4MM	146.22	146.82	N	
ALBANY	W4MM	146.10	146.70	N	A
ALBANY	W4MM	147.72	147.12	N	K
ALBANY	W4MM	146.13	146.73	N	
ALBANY	WB4TFW	147.75	147.15	N	
ALBANY	W4MM	144.55	145.15	N	L
AMERICUS	WD4EBB	147.87	147.27	N	
#ASHBURN/TIFTON	WD4LYV	147.885	147.285	*	UNCOORD.
ATHENS	WA4BKF	146.145	146.745	*	P
ATHENS/CRAWFORD	K4TQU	147.975	147.375	*	P
ATL/UNION CITY	WA4UPE	146.025	146.625	*	BEP
ATLANTA	K4JPD	147.795	147.195	*	T
ATLANTA	W4DOC	146.22	146.82	*	EP
ATLANTA	K4DRQ	144.69	145.29	*	B
ATLANTA	K4CLJ	146.37	146.97	*	T
ATLANTA	W4DOC	144.75	145.35	*	
ATLANTA	W4DOC	144.75	145.35	N	
ATLANTA	W4AQL	144.55	145.15	N	PEB
ATLANTA	WB4QGR	146.04	146.64	N	T
ATLANTA	WA4NNO	146.40	147.00	N	P
ATLANTA	WD4KDT	147 855	147.255	*	BELP
ATLANTA	K4YSB	147.705	147.105	N	Y
ATLANTA/AIRPORT	W4REI	147.63	147.03	N	
ATLANTA/BELL	W4PME	144.81	145.41	*	BEP
ATLANTA/GPCO	WA4VBX	147.885	147.285	*	
ATLANTA/MARIETTA	N4NFP	146.055	146.655	*	ABLRT118.8
ATLANTA/MARIETTA	N4NEQ	147.945	147.345	*	ELRP118.8
ATLANTA/SWEAT MT	KD4NC	146.13	146.73	*	LK
AUGUSTA	AA4UA	144.77	145.37	N	AB
AUGUSTA	N4BMA	147.78	147.18	N	Y
AUGUSTA	NA4I	146.385	146.985	*	BELP
AUGUSTA	N4MWQ	146.04	146.64	*	K
AUGUSTA	NI4S	147.72	147.12	N	P
#AUGUSTA	NA4I	144.81	145.41	*	UNCOORD.
AUGUSTA	KT4N	146.34	146.94	N	
AUGUSTA	W4TUN	144.51	145.11	N	A
AUGUSTA	N4TDL	144.69	145.29	*	
AUGUSTA	W4DV	144.89	145.49	N	AB
BALDWIN	WD4NHW	147.78	147.18	N	A
BONAIRE	KM4DT	147.615	147.015	N	
BOSTON	W4UCJ	147.795	147.195	*	ABE
BRNSWK/JEKYLL IS	KB4PXX	144.81	145.41	*	
BRUNSWICK	K4TVE	146.13	146.73	N	A
CALHOUN/JASPER	KC4AQS	147.405	146.805	N	PLBR
CARROLLTON	W4FWD	146.04	146.64	N	BET131.8
CARTERSVILLE	N4GIS	146.415	147.015	*	BERP
CEDARTOWN	W4CMA	147.72	147.12	*	P
CHEAHA MTN (AL)	WB4GNA	147.69	147.09	*	
CLARKESVILLE	K4HCA	147.72	147.12	*	BEP
CLAYTON	WA4BLQ	144.65	145.25	*	
CLEVELAND/LONG	WB4HIG	146.31	146.91	N	A
COCHRAN	N4MXC	144.51	145.11	*	ABE
COLUMBUS	W4CVY	146.01	146.61	N	A
COLUMBUS	KA4CEK	144.71	145.31	N	
COLUMBUS	W4CVY	146.28	146.88	N	
COMMERCE	KB4ZUN	147.825	147.225	N	
CONYERS	WB4JEH	146.01	146.61	*	T151.4
CONYERS	WB4JEH	144.63	145.23	*	
CONYERS	N4EMM	147.81	147.21	*	PEB
COOLIDGE	N4JBF	144.57	145.17	N	PR
CORDELE	KA4WUJ	144.89	145.49	*	
COVINGTON	WA4ASI	146.325	146.925	*	AL
COVINGTON	WA1KMS	147.87	147.27	*	
CUMMING/SAWNEE	K4BYK	147.75	147.15	N	PL
DAHLONEGA	N4KHQ	147.435	146.835	*	
DALLAS	K4DVJ	146.25	146.85	N	PE
DALLAS	WD4LUQ	147.495	146.895	*	BRT77.0
DALTON	KE4UJ	144.63	145.23	N	A
DALTON	N4BZJ	147.735	147.135	*	ABELRT100.
DECATUR	W4BOC	144.85	145.45	*	
DOUGLASVILLE	N4UOX	144.51	145.11	*	P
DOUGLASVILLE	WA4CLC	147.96	147.36	*	
DUBLIN	WA4HZX	147.96	147.36	N	A
EASTMAN	K4KEC	144.61	145.21	*	B
EATONTON	KC4YHM	147.69	147.09	*	ABEL
ELBERTON	N4UJT	146.025	146.625	N	
ELLIJAY/TALONA M	W4HHH	146.385	146.985	*	AB
FAYETTEVILLE	W4PSZ	144.61	145.21	N	PE
FAYETTEVILLE	K4UWN	146.085	146.685	N	
FOLKSTON	K4DMK	146.19	146.79	N	
FORSYTH	KB4KIN	147.765	147.165	N	PL
#FORSYTH	W4STJ	147.315	147.915	N	UNCOORD.
#FORT MTN.	N4YYD	144.625	145.525	N	UNCOORD.
GAINESVILLE	W4NSO	146.07	146.67	*	PET131.8
GRIFFIN	K4HYB	144.79	145.39	*	P
GRIFFIN	K4HYB	146.31	146.91	N	
HARTWELL	WA4RBS	146.295	146.895	*	B
HINESVILLE	KK4UV	144.87	145.47	*	AB
IRWINTON	WB4NFG	147.84	147.24	N	
JASPER	KB4IZF	144.77	145.37	*	RPLB
JASPER	W4OOM	146.10	146.70	*	
JESUP	N4PJR	146.325	146.925	*	P
JESUP	WA4EQL	146.07	146.67	*	
JESUP/SCREVEN	N4PJR	147.945	147.345	*	O
JONESBORO	WA4DIW	144.57	145.17	*	E
JONESBORO	WA4OGE	144.73	145.33	*	E
JULIETTE	KD4IEZ	146.205	146.805	*	ET100.0
KIBBEE	K4HVK	146.22	146.82	*	A
LAFAYETTE	KB4VAK	147.975	147.375	N	A
LAGRANGE	WB4BXO	147.93	147.33	N	
LAVONIA	K4NVG	146.115	146.715	*	BEPT100.0
LAWRENCEVILLE	WD4JXR	147.675	147.075	N	EP
MACON	WA4DDI	147.66	147.06	*	T
MACON	W4BKM	146.06	146.66	*	NBP
MACON	N3SM	146.295	146.895	*	AT123.0
MACON	WB4OLL	144.83	145.43	*	PLR
MADISON	WB4DKY	146.265	146.865	*	A
MARIETTA	WA4QPL	144.89	145.49	*	PE
MARIETTA	W4IUD	146.28	146.88	N	
MARIETTA	K4LCI	144.83	145.43	N	E
MARIETTA	N4NFP	146.175	146.775	*	BLRPT118.8
METTER	W4TYM	147.645	147.045	N	ABE
MIDWAY	KF4UM	147.615	147.015	*	O
MILLEDGEVILLE	WB4DOJ	146.10	146.70	*	A
MILLEDGEVILLE	KF4LT	144.55	145.15	*	PT
MILLEDGEVILLE	K4FRM	147.735	147.135	*	BL
MOULTRIE	WD4KOW	146.19	146.79	N	
NEWNAN	K4SEX	144.53	145.13	*	BP
NEWNAN	K4SEX	146.19	146.79	*	BP
PEMBROKE	WB4CJB	147.675	147.075	N	A
PERRY	AC4MU	147.90	147.30	*	ABER
PERRY	KB4KIN	146.355	146.955	N	PL
PINE MT/HAMILTON	WB4ULJ	144.59	145.19	N	
PRESTON	WB4TOV	146.385	146.985	N	
QUITMAN	W4FGH	146.28	146.88	N	
RINGGOLD	W4ABZ	146.115	146.715	N	
ROCHELLE	WB4OQX	146.40	147.00	*	BET100.0
ROCKY TOP MT	K5PRE	146.355	146.955	N	
ROME	WB4YSV	147.90	147.30	N	
ROME/MT. ALTO	W4VO	146.34	146.94	*	BP
ROSSVILLE	W4FGQ	144.75	145.35	*	
ROSWELL	N4CLA	147.66	147.06	N	PE
SANDERSVILLE	N4CGV	144.67	145.27	*	A
SAVANNAH	KK4TO	146.10	146.70	*	PE
SAVANNAH	KK4TO	147.81	147.21	*	PE
SAVANNAH	W4HBB	146.28	146.88	N	AB
SAVANNAH	W4HBB	146.37	146.97	N	AB
ST SIMONS ISL	KA4CVE	147.69	147.09	N	
ST. MARYS	KA4UUB	146.385	146.985	N	
STATESBORO	NC4D	147.705	147.105	N	
STOCKBRIDGE	WA4JDR	144.71	145.31	N	
STONE MT.	W4BOC	146.16	146.76	*	
SUMMERVILLE	KA4LVY	147.825	147.225	*	A
SWAINSBORO	K4VYX	146.19	146.79	N	O
SWEAT MT/MARIETT.	N4CLA	144.87	145.47	N	PE
THOMASTON	K4IMK	147.99	147.39	N	
THOMASVILLE	W4UCJ	147.66	147.06	*	
THOMSON	KC4GSS	146.235	146.835	N	A
TOCCOA	KA4DIP	147.93	147.33	*	
TWIN CITY	N4REB	147.915	147.315	N	PR
VALDOSTA	KB0Y	147.735	147.135	*	PT
VALDOSTA	KB0Y	144.53	145.13	*	T
VALDOSTA	N4ELN	146.16	146.76	*	BRPT52.525
VIDALIA	KE4ZZ	146.025	146.625	*	A
WALESKA/PNLGMT	KE4PN	144.67	145.27	N	L
WARM SPRINGS	KN4FE	146.385	146.985	N	BE
WARNER ROBINS	WA4QWI	146.25	146.85	*	P
WARNER ROBINS	WB4BDP	147.78	147.18	N	C
#WARNER ROBINS	WB4BDP	146.01	146.61	*	UNCOORD.
WATKINSVILLE	N4NFA	147.645	147.045	N	RPEL
WAYCROSS	KD4CEX	146.04	146.64	*	A
WAYNESBORO	WD4COL	144.63	145.23	N	
WRENS	KB4NA	146.175	146.775	N	
WRIGHTSVILLE	WA4RVB	146.34	146.94	N	ABLR

220 MHZ

ACWORTH	N4MTA	222.72	224.32	*	BEP
ALPHARETTA	KC4JNN	223.26	224.86	*	ABELRT100.
ATL/MARIETTA	N4NEQ	222.84	224.44	*	BLRPT118.8
ATLANTA	N4BLR	222.68	224.28	N	
ATLANTA	KK4C	223.22	224.82	N	PLR
ATLANTA	W4DOC	222.96	224.56	*	
ATLANTA	W4DOC	222.74	224.34	*	
ATLANTA-NE	KC4OVY	222.60	224.20	*	BRPT100.0
ATLANTA/BELL	W4ZTL	223.02	224.62	*	BEP
ATLANTA/MARIETTA	N4NFP	222.52	224.12	*	ABLRT118.1
AUGUSTA	AA4UA	222.60	224.20	*	AB
AUGUSTA	WB4KXO	223.34	224.94	*	P
BALDWIN	WS4F	222.50	224.10	N	
BRUNSWICK	N3GLC	222.58	224.18	N	
#CALHOUN	KQ4HT	222.86	224.46	*	UNCOORD.
CARTERSVILLE	N4GIS	223.00	224.60	*	BERP
CLAYTON	WD4MBK	223.12	224.72	N	
CLEVELAND	N4RBT	222.78	224.38	N	P
#CONYERS	WB4JEH	222.42	224.02	*	UNCOORD.
CUMMING	K4JSR	223.38	224.98	*	PL
DALLAS	N4YEA	222.94	224.54	*	BP
DALLAS	N4YDX	222.58	224.18	*	BL
DALTON	N4KVC	223.14	224.74	*	ER
DALTON	N4BZJ	223.08	224.68	N	
DALTON	N4BZJ	222.76	224.36	*	ABT88.5
ELLIJAY-BUCK MTN.	N4YYD	222.64	224.24	N	BERP
HIRAM	KC4PZD	223.10	224.70	*	B
HIRAM	N4ZJG	223.36	224.96	N	ABL
MACON	W4BKM	223.06	224.66	*	
MARIETTA	WA4QPL	223.30	224.90	*	PE
MARIETTA	KV4L	222.66	224.26	N	BP
MARIETTA	N4MTA	222.90	224.50	*	BEP
NORCROSS	KB4PRH	222.88	224.48	N	
PERRY	AC4MU	223.24	224.84	*	ABER
RINGGOLD	W4ABZ	223.04	224.64	N	P
ROCKMART	KC4KLW	223.18	224.78	*	
ROME	WB4YSV	222.82	224.42	N	
ROSSVILLE	KC4EV	223.34	224.94	N	
SASAFRAS MTN.	KC4JNN	222.56	224.16	*	ABELRT100.
STONE MT.	W4BOC	223.16	224.76	*	
TEMPLE	KC4NYV	222.70	224.30	N	B
THOMASVILLE	N4JBF	222.72	224.32	N	AL
VALDOSTA	KB0Y	222.86	224.46	*	PT
WALESKA/PNLGMT	N4KSM	222.92	224.52	N	A
YORKVILLE	WB4UPC	223.28	224.88	N	

440 MHZ

ALBANY	W4MM	449.50	444.50	N	
ALBANY	W4MM	439.25	427.25	N	V
ALPHARETTA	WB6RTH	447.00	442.00	*	ABEKL
ATHENS	NB4X	448.30	443.30	N	
ATLANTA	WB4UWL	449.50	444.50	*	
ATLANTA	KD4LXT	448.875	443.875	*	C-BEP
ATLANTA	W4DOC	444.825	449.825	N	NB
ATLANTA	N4WQ	449.625	444.625	N	AO
ATLANTA	W4DOC	449.45	444.45	*	
ATLANTA	WA4YNZ	447.975	442.975	*	TPL
ATLANTA	W4DOC	449.45	145.67	N	R
ATLANTA	KE4ZV	448.65	443.65	*	T118.8
ATLANTA	W4DOC	449.825	444.825	*	
ATLANTA	WA4NNO	449.925	444.925	N	
ATLANTA	WA4YNZ	449.975	444.975	*	PTLR
ATLANTA/BELL	W4ZTL	449.15	444.15	*	BEP
#ATLANTA/BELL	W4ZTL	434.00	421.25	*	UNCOORD.
ATLANTA/MARIETTA	N4NEQ	449.775	444.775	*	ABLRP118.8
ATLANTA/MARIETTA	N4NEQ	449.05	444.05	*	BT118.8
ATLANTA/MARIETTA	N4NFP	448.80	443.80	*	BLRPT118.8
ATLANTA/STONE MT	W4BOC	449.25	444.25	*	
ATLANTA/SWEAT MT	WA4NMF	447.725	442.725	N	T
AUGUSTA	NA4I	449.95	444.95	*	
AUGUSTA	AA4UA	449.40	444.40	*	AB
BALDWIN	WD4NHW	447.35	442.35	N	
BRNSWK/JEKYLL IS	KB4PXX	439.25	421.25	*	V
BRUNSWICK	KD4CPO	448.425	443.425	N	A
BRUNSWICK	K4TVE	449.975	444.975	N	O

MORE GEORGIA REPEATERS

CALHOUN/JASPER	KC4AQS	448.375	443.375	N	BP
CHATSWORTH	N4OGF	448.00	443.00	N	
CLARKESVILLE	K4HCA	447.425	442.425	*	B
CONYERS	KC4ELV	449.875	444.875	*	BLP
CONYERS	N4EMM	449.75	444.75	N	PL
CONYERS	WB4JEH	449.55	444.55	*	T151.4
CONYERS	WB4JEH	447.55	442.55	*	T151.4
#CONYERS	N4EMM	447.75	442.75	*	UNCOORD.
COVINGTON	WA1KMS	449.60	444.60	*	
COVINGTON	WA4ASI	449.80	444.80	*	ALT88.5
COVINGTON	KL7TF	448.75	443.75	*	B
COVINGTON	KD4QOW	449.175	444.175	*	BEP
DACULA	KK4IN	448.55	443.55	N	ALR
DALLAS	WD4LUQ	449.70	444.70	*	BRT77.0
#DALTON	N4BZJ	447.175	442.175	*	UNCOORD.
DALTON	N4BZJ	449.85	444.85	*	
DECATUR	N3APR	447.20	442.20	N	A
DECATUR	WB4LBM	449.20	444.20	N	
DECATUR	KA4UFM	448.95	443.95	*	BPT110.9
DOUGLASVILLE	N4AQG	449.575	444.575	*	B
DULUTH	N2NOG	447.30	442.30	N	BELP
DUNWOODY	W4QO	448.15	443.15	*	
DUNWOODY	W4QO	447.15	442.15	*	
EATONTON	KC4YHM	447.925	442.925	*	
ELLIJAY	W4HHH	447.70	442.70	*	C
ELLIJAY-BUCK MTN.	N4YYD	448.35	443.35	N	BEORP
GAINESVILLE	W4NSO	447.625	442.625	*	PET131.8
GRIFFIN	WB4DEB	448.90	443.90	N	PT
HAMILTON	WB4ULJ	449.40	444.40	N	BPR
HAMPTON	WB4DEB	448.125	443.125	N	
HAMPTON	N4RDM	448.40	443.40	N	PRP
HIGH HOUSE MTN	KD4APP	448.20	443.20	*	
HIGH PT/LOOKT MT	KB4VAK	448.45	443.45	N	ABRT88.5
JASPER	KB4IZF	449.375	444.375	*	BPLR
JASPER	KB4MDE	448.425	443.425	N	
JESUP	N4PJR	449.925	444.925	*	O
JONESBORO	N4QCP	448.225	443.225	N	
LAVONIA	K4NVG	447.475	442.475	*	PB
LAWRENCEVILLE	KC4LU	449.40	444.40	*	BT
LAWRENCEVILLE	WB4QDX	449.00	444.00	N	
MACON	K4VTT	447.275	442.275	*	ABELRT100.
MACON	N4IWK	447.875	442.875	*	P
MACON	W4BKM	449.10	444.10	*	C
MACON	K4VTT	449.275	444.275	N	
MARIETTA	KM4BA	448.60	443.60	N	PT
MARIETTA	KM4BA	448.70	443.70	N	
MARIETTA	WB4BQX	448.500	443.50	*	BEP
MARIETTA	KM4BA	449.325	444.325	N	PTO
MIDWAY	KF4UM	449.85	444.85	*	O
NEWNAN	N4EBZ	449.675	444.675	N	P
PERRY	AC4MU	449.95	444.95	*	
RINGGOLD	WA4LJU	448.925	443.925	N	
ROCKMART	KC4KLW	448.275	443.275	*	ABT179.9
ROCKMART	KC4KLW	448.525	443.525	*	
ROCKY FACE	AA4EO	447.175	442.175	N	
ROSSVILLE	N4PLP	447.125	442.125	N	C
SAVANNAH	WD4AFY	449.00	444.00	N	B
SAVANNAH	KC4AZU	447.70	442.70	*	C
SAVANNAH	WA4VHP	439.25	426.25	*	BRTV
SMYRNA	N4IBW	449.65	444.65	N	
STOCKBRIDGE	N4JMD	448.325	443.325	N	PTL
STOCKBRIDGE	N4JMD	448.325	443.325	N	PTR
STONE MT.	N4MSE	449.025	444.025	N	
SWEAT MT/MARIETT.	N4CLA	449.475	444.475	N	EP
VALDOSTA	N4ELN	449.70	444.70	*	T
VALDOSTA	KB0Y	449.35	444.35	*	PT
WALESKA/PNLOG MT	WB4YSV	448.85	443.85	N	L
WALUSKA/PINE LOG	WB4YSV	443.85	448.85	N	NB
WARM SPRINGS	N4UER	447.40	442.40	N	BE
WATKINSVILLE	N4NFA	449.725	444.725	N	RPEL

SERA REPEATER SYMBOLS

*	Full Member Supporter	M	T-MARC Terr. Repeater
D	Delinquent Membership	NB	Not on SERA Freq. Plan
N	Non-Member SERA	O	Off the Air Temporarily
A	Autopatch (Open)	P	Private Autopatch
B	Emergency Power	PR	Proposed Coordination
C	Under Construction	R	Remote Base System
E	Emergency Autopatch	T	Tone Accessed
K	Packet Operation	V	Television (SSTV/ATV)
L	Linked Repeater	Y	RTTY Operation

NOTE: Some repeaters allow voice, as well as other functions on their machine. Generally the second function is indicated, but it does not necessarily mean the machine is solely operated in that mode. Operators may check with owners for information. Repeaters with normal input/output (pairs) are listed in the regular FM repeater index and their operation of Packet is indicated with ``K". For tone-accessed repeaters, the codes column contains the tone or access code only for those repeaters which the owner or trustee has given us written permission to publish.
Entries with "#" in front of the city indicate repeaters added to this index that have not been coordinated through the local SERA state coordinator. Work with your coordinator to get this indicator removed.

920 MHZ

DALTON	N4BZJ	907.10	919.10	*	

1270 MHZ

ATLANTA NORTH	W4DOC	1271.40	1291.40	*	
ATLANTA/BELL	KB4KIN	1272.00	1292.00	*	

BEACONS

ATL/MARIETTA	N4NEQ	427.25	BEACON	N	VR

KENTUCKY REPEATERS

6 METERS

#ASHLAND	WA4IBB	52.01	53.01	N	UNCOORD.
GUTHRIE	KA4ZKL	52.23	53.23	N	C
LOUISVILLE	WB4LBR	53.025	52.025	N	NB
STANTON	WD4KNE	52.81	53.81	N	P

2 METERS

ALLEN	K4ICN	147.90	147.30	*	AL
ASHLAND	KA4DII	147.84	147.24	N	P
ASHLAND	KD4SN	146.34	146.94	*	P
ASHLAND	WA8KWH	147.93	147.33	N	A
BARDSTOWN	WB4GGH	144.87	145.47	*	
BAXTER	WM4H	147.78	147.18	N	A
BENTON	WG4U	147.72	147.12	N	
BEREA	KI4B	146.115	146.715	N	
BOWLING GREEN	WD4MNI	146.055	146.655	*	R
BOWLING GREEN	KA4CLL	146.25	146.85	N	
CALVERT CITY	KA4KFD	147.705	147.105	N	AB
CAMPBELLSVILLE	WA4UXJ	146.04	146.64	N	
CORBIN	WD4KWV	146.01	146.61	*	P
COVINGTON	WB8NON	147.99	147.39	*	A
COVINGTON	WB8NON	144.81	145.41	*	O
DANVILLE	WD4DZC	146.055	146.655	N	A
#DAWSON SPRINGS	N4STY	146.13	146.73	N	UNCOORD.
DEANE	AK4U	144.61	145.21	N	L
DIXON	N4IOX	147.855	147.255	*	P
DORTON	WA4SWF	146.13	146.73	N	BR-O
DRAKESBORO	WF4N	146.22	146.82	N	C
ELIZABETHTOWN	W4BEJ	146.38	146.98	N	ABL
ELIZABETHTOWN	KD4GLI	144.75	145.35		A
FAIR DEALING	N4AVE	147.84	147.24	N	
#FERN CREEK	WB4NSY	146.16	146.76	N	UNCOORD.
FLORENCE	K4JBV	146.295	146.895	*	A
FRANKFORT	K4NGQ	147.075	147.675	N	
FRANKFORT	KC4KDZ	144.79	145.39	*	BEP
FRANKFORT	KC4AI	147.84	147.24	N	
GLASGOW	KF4DC	144.81	145.41	N	
GLASGOW	W4WZH	146.34	146.94	N	AB
GRAYSON	KF4JO	146.10	146.70	N	
GREENVILLE	WA4TTC	146.145	146.745	N	P
GRETHEL	KJ4VF	147.645	147.045	*	C
GUTHRIE	KA4NNE	146.205	146.805	N	L
HALLS GAP	WD8PRH	144.57	145.17	*	AL
HARLAN	WA4ZAC	147.705	147.105	N	
#HARLAN/PINE MTN	WA4ZAC	147.705	147.105	*	UNCOORD.
HAZARD	K4VHF	146.07	146.67	*	B
HENDERSON	K4DPP	146.37	146.97	N	
HENDERSON	W4KVK	144.89	145.49	N	
HIGHLAND HEIGHTS	W4YWH	146.19	146.79	*	
HIGHLAND HEIGHTS	K4CO	147.855	147.255	*	PT123.0
HOPKINSVILLE	WA4ZVL	147.63	147.03	N	A
IRVINGTON	WB4WVH	146.30	146.90	N	AE
LA GRANGE	N4RBL	147.99	147.39	*	T151.4
LA GRANGE	N4RBL	144.53	145.13	*	BT151.4
LANCASTER	AC4AO	146.13	146.73	*	C
LAWRENCEBURG	KK4PL	144.69	145.29	N	A
LEXINGTON	K4KJQ	146.16	146.76	N	PE
LEXINGTON	WB4FDK	147.615	147.015	N	
LEXINGTON	KJ4VF	147.645	147.045		CL
LEXINGTON	WA4HBM	147.765	147.165	N	
#LEXINGTON	W4AUZ	146.34	146.94	N	UNCOORD.
LEXINGTON	KC4TX	144.85	145.45	N	P
LEXINGTON	N4YUU	144.73	145.33	N	P
LEXINGTON/GEORGE	WD8PRH	144.63	145.23	*	AL
LITCHFIELD	KB4NFK	147.825	147.225	*	
LONDON	KC4ZFH	147.885	147.285	N	CT
LOUISVILLE	W4PJZ	147.63	147.03	*	BERPT151.4
LOUISVILLE	W4CN	147.78	147.18	*	PE
LOUISVILLE	N4KWT	147.87	147.27	N	
LOUISVILLE	KQ9Z	147.96	147.36	*	A
LOUISVILLE	N4NMC	147.67	147.07	*	BEP
LOUISVILLE	W4BDC	146.10	146.70	*	BEP
LOUISVILLE	W4OAU	146.28	146.88	*	P
LOUISVILLE	WD8PRH	144.63	145.23	*	L
LYNCH/BLACK MT.	N4IZD	147.945	147.345	N	
MARION	KA4FGA	147.885	147.285	N	
MARION	KA4FGA	147.705	147.105	N	
MAYFIELD	WA4NAR	147.84	147.24	N	
MAYSVILLE	WA4WMM	144.87	145.47	*	BEP
MIDDLESBORO	W4PPM	146.175	146.775	N	
MONTICELLO	N4TLK	144.55	145.15	*	C
MOREHEAD	K4GFY	146.31	146.91	N	
MOREHEAD	KJ4VF	144.53	145.13	*	R
MOUNTAIN ASH	KD4DAX	144.75	145.35		AC
MT. STERLING	WD4KNE	147.93	147.33	N	P
MURRAY	WB4NTB	146.34	146.94	*	A
NICHOLASVILLE	WB4CWF	144.89	145.49	N	PE
OWENSBORO	K4HY	147.81	147.21	N	AL
OWENSBORO	KN4KQ	146.085	146.685	*	ALR
OWINGSVILLE	N4TLP	147.675	147.075	*	A
PADUCAH	K4CUW	146.16	146.76	N	
PADUCAH	W4WQ	147.66	147.06	N	
PAINTSVILLE	AK4U	146.19	146.79	N	PL
PHELPS	KJ4YK	147.69	147.09	*	R
PIKEVILLE	N4IWZ	144.55	145.15	*	RPE
PIKEVILLE	KM4IV	146.25	146.85	N	ELR
PRESTONSBURG	WB4UBY	147.765	147.165	N	
PRINCETON	W4KBL	146.07	146.67	N	
PROVIDENCE	N4IUI	147.93	147.33	N	
RABBIT HASH	WA4OCP	146.355	146.955	N	
RADCLIFF	W4BEJ	146.325	146.925	N	ABL41
RICHMOND	AC4UW	146.265	146.865	*	AB
SALEM	N4IL	147.915	147.315	*	P
SALVISA	KC4ZOX	146.235	146.835	*	C
SCOTTSVILLE	KJ4GL	144.65	145.25	N	ACT100.0
SHELBYVILLE	KE4LR	147.60	147.00	*	BEP
SOMERSET	N4AI	146.28	146.88	*	BL
SPRINGFIELD	WA4SJH	147.90	147.30	N	A
STANTON	WD8PRH	144.69	145.29	N	CL
STANTON	KC4TUK	146.37	146.97	*	ARC
UNION CITY (TN)	WA4YGM	146.10	146.70	*	
VANCEBURG	KC4TKI	146.175	146.775	*	P
#VIRGIE	K4NRR	147.60	147.00	N	UNCOORD.
WALTON	K4CO	147.975	147.375	*	
#WHTSBRG/PINE MT	WD4PDJ	147.99	147.39	N	UNCOORD.
WILLIAMSBURG	KG4M	147.60	147.00	N	
WINCHESTER	WB4ASZ	147.72	147.12	*	EP

220 MHZ

ASHLAND	KC4QK	222.34	223.94	N	
AUGUSTA	KC4UXD	222.32	223.92	N	PC
JARVIS	KB4PNG	223.38	224.98	*	ABELR
LANCASTER	KD4RXF	222.96	224.56		P
LEXINGTON	AC4AO	222.82	224.42	*	ABEL
LEXINGTON	WB8VMI	222.14	223.74	*	
LEXINGTON	N4YUU	223.34	224.94	N	
LOUISVILLE	KA4MKT	222.70	224.30	N	
#LOUISVILLE	KB4VEZ	222.82	224.42	N	UNCOORD.
LOUISVILLE	W4MOP	223.22	224.82	N	P
PIKEVILLE	WB4F	222.98	224.58	N	
PIKEVILLE	KD4DAR	223.02	224.62	*	R
SOMERSET	N4AI	223.28	224.88	*	BL
SOMERSET	N4AI	222.70	224.30	*	BER
VERSAILLES	KN4QP	222.62	224.22	*	BERP

440 MHZ

ASHLAND	KA4MKG	449.925	444.925	N	C
ASHLAND	WB4TAT	449.975	444.975	*	
BOWLING GREEN	W4HTB	439.25	922.25	*	V
BOWLING GREEN	W4HTB	439.25	426.25	*	V
BOWLING GREEN	W4HTB	439.25	280.00	*	V
BOWLING GREEN	WD4MNI	449.10	444.10	*	AL
BOWLING GREEN	N5KOL	449.65	444.65	*	P
CORBIN	WB4IVB	449.90	444.90	*	R
DORTON	KJ4VF	448.25	443.25	*	CR
ELIZABETHTOWN	KE4NS	439.250	421.250	N	V
ELIZABETHTOWN	W4BEJ	449.80	444.80	N	ABL
GLASGOW	W4WZH	449.925	444.925	N	
GLASGOW/CVCTY.	KF4DC	449.25	444.25	N	
GRETHEL	KJ4VF	449.525	444.525	*	
HAWESVILLE	KB4QFL	449.625	444.625		P
HENDERSON	N9APA	449.50	444.50	N	
HIGHLAND HEIGHTS	W4YWH	449.90	444.90	*	
HIGHLAND HEIGHTS	K4CO	449.35	444.35	*	PT123.0
JENKINS	KK4WH	449.30	444.30	N	PLRC
LATONIA	AA4XV	447.40	442.40	N	PT
LEWISPORT	KN4KQ	449.55	444.55	*	ALR
LEXINGTON	WD4EJA	449.95	444.95	N	
LEXINGTON	N4YUU	449.85	444.85	N	
LOUISVILLE	KA4WTT	449.10	444.10	*	BELRPT
LOUISVILLE	KB4YJ	447.725	442.725	N	BET
LOUISVILLE	KD4DYH	447.225	442.225	N	
LOUISVILLE	WB4ZZD	449.30	444.30	*	O
LOUISVILLE	N4NMC	449.60	444.60	*	BEP
LOUISVILLE	N4ORL	447.00	442.00	N	RP

MORE KENTUCKY REPEATERS

LOUISVILLE	WA4AUN	449.70	444.70	N	
LOUISVILLE	W4MOP	449.50	444.50	N	P
LOUISVILLE	KB4RYM	447.50	442.50	N	C
LOUISVILLE	WD9EQC	448.50	443.50	N	
LOUISVILLE AREA	N4RBL	447.45	442.45	*	BEPT151.4
LYNCH/BLACK MT	N4IZD	448.10	443.10	N	
MADISONVILLE	WD4EBZ	447.775	442.775		BC
MADISONVILLE	KC4FIE	447.425	442.425		C
META	WB4UBY	448.50	443.50	N	R
NEBO	AA4NI	449.85	444.85	N	C
NICHOLASVILLE	WB4CWF	449.975	444.975	N	CR
OAK LEVEL	NN2E	449.20	444.20	N	T173.8
OWENSBORO	WB4AOH	439.25	427.25	N	V
PHELPS	N4MVY	449.575	444.575	N	
PIKEVILLE	KC4VYX	449.675	444.675	N	
SALEM	KC4VXR	449.825	444.825	*	
SALVISA	KC4UPE	449.875	444.875		BCPT167.9
SPRINGFIELD	WA4SJH	444.60	449.60	N	
STANTON	N4VOS	447.075	442.075	N	CRP
UNION	KC4COV	449.175	444.175	*	AR
VERSAILLES	KN4QP	448.775	443.775		P

MISSISSIPPI REPEATERS

10 METERS

POPLARVILLE	WA5WRE	29.52	29.62	*	O

6 METERS

ELLISVILLE	N5DWU	52.01	53.01	*	

2 METERS

ABERDEEN	WB5USN	147.87	147.27	N	A
ACKERMAN	NO5N	147.72	147.12	N	
AMORY	KB5DSN	147.69	147.09	N	
AMORY	KB5DWX	146.34	146.94	N	A
BAY ST. LOUIS	K0VNO	146.25	146.85	N	
BAY ST. LOUIS	K5GY	146.10	146.70	N	
BILOXI	KC5IF	146.13	146.73	*	APER
BILOXI	K5TYP	146.19	146.79	N	AB
BOONEVILLE	WB5UVT	144.59	145.19	*	AB
BUDE	K5JMD	146.25	146.85	N	
CHATAWA	WB5GOJ	144.71	145.31	N	PR
CLEVELAND	K5BWW	146.25	146.85	N	
CLINTON	AA5JC	147.945	147.345	N	PR
COLUMBIA	KB5EZN	147.885	147.285	N	P
COLUMBUS	N5NKZ	147.60	147.00	N	A
COLUMBUS	KA5LVU	144.83	145.43	N	A
CORINTH	KB4CTS	147.885	147.285	N	
CORINTH	KA5RPB	144.29	145.39	N	A
CORINTH	WB5VOJ	146.325	146.925	N	
CORINTH	K5UFH	146.40	147.00	N	
D'IBERVILLE	KC5IF	144.81	145.41	*	APER
ELLISVILLE	N5DWU	147.465	146.865	*	PLT
ESCATAWPA	W5OXA	147.825	147.225	N	L
FULTON	N5VGK	144.89	145.49	N	A
GREENVILLE	WA5MBA	146.22	146.82	N	A
GREENWOOD	KA5TQY	146.115	146.715	N	
GRENADA	WB5LVA	146.10	146.70	N	
GULFPORT	KA5VFU	147.975	147.375	*	L
GULFPORT	KA5CYR	144.73	145.33	*	ABE
HATTIESBURG	KA5NNX	144.77	145.37	N	
HATTIESBURG	W5CJR	147.96	147.36	*	
HERNANDO	K5VV	146.31	146.91	N	A
HORN LAKE	KA0BRN	144.57	145.17	N	EPT
INVERNESS	WA5UDQ	147.78	147.18	N	
ISOLA	KC5OB	146.355	146.955	*	
IUKA	WB5MFK	146.25	146.85	N	A
JACKSON	NC5Y	147.675	147.075	N	AT
JACKSON	W5AXQ	146.16	146.76	*	
JACKSON	K5QNE	146.28	146.88	*	ABE
JACKSON	KA5SBK	146.34	146.94	N	BET100.0
JACKSON	N5NIL	146.04	146.64	*	
JACNITO	WB5HKK	147.75	147.15	N	A
KOSCIUSKO	W5LWC	146.25	146.85	N	
LAUREL	WV5D	146.43	147.03	N	
LAUREL	KC5RC	147.855	147.255	N	
LAUREL	KB5IXI	146.01	146.61	*	P
LOUISVILLE	KB5PKU	147.96	147.36	*	A
MAGEE	KA5LNY	147.90	147.30	*	
MCCOMB	K5JMD	146.34	146.94	N	A
MCHENRY	KA5CYR	147.93	147.33	*	B
MENDENHALL	K5HYE	144.51	145.11	*	B
MERIDIAN	W5DEJ	146.10	146.70	*	A
MERIDIAN	KA5MJM	146.37	146.97	N	RP
MONTICELLO	N5JHK	147.615	147.015	N	PR
MOOREVILLE	WB5NAY	146.04	146.64	N	A
NATCHEZ	K5OCM	146.31	146.91	N	A
NATCHEZ	K5SVC	147.96	147.36	N	
NATCHEZ	W5KHB	146.085	146.685	N	
NEW ALBANY	N5CAX	146.07	146.67	N	AB
NEW HEBRON	N5MRS	147.69	147.09	N	AEATLRB
OCEAN SPRINGS	W5LDD	147.63	147.03	*	AB
OLIVE BRANCH	KA5WMH	144.75	145.35	N	C
PASCAGOULA	N5AAY	146.28	146.88	N	A
PASCAGOULA	W5WA	144.51	145.11	*	
PASCAGOULA	KI5ZH	146.37	146.97	*	
PEARL/RANKIN CO.	KF5IZ	147.75	147.15	N	ABET88.5
PETAL	N5LRQ	147.735	147.135	*	O
PHILADELPHIA	N5EPP	147.93	147.33	N	
PICAYUNE	K5LFP	144.55	145.15	N	A
PONTOTOC	WB5NAY	147.98	147.38	N	
POPLARVILLE	WA5WRE	144.61	145.21	*	A
PORT GIBSON	KE5WO	146.025	146.625	N	
PRENTISS	WB5UNA	147.99	147.39	N	
RICHTON	N5OCF	147.66	147.06	*	
SENATOBIA	KB5DMT	146.385	146.985	N	
SOUTHAVEN	N5PYQ	144.77	145.37	N	O
STARKVILLE	W5VZF	146.13	146.73	*	
STARKVILLE	KF5C	146.205	146.805	N	P
TUPELO	AI5R	147.84	147.24	N	A
VICKSBURG	WJ5L	144.69	145.29	N	
VICKSBURG	WB5SXK	147.87	147.27	N	
WALLS	N5NBG	144.67	145.27	*	PT162.2
WARSAW	N4DRL	147.825	147.225	N	
WATER VALLEY	WB5QFX	146.40	147.00	N	
WAYNESBORO	N5HXG	147.705	147.105	N	PR
WEST POINT	KO5S	146.19	146.79	N	A
WIGGINS	KB5DZJ	144.67	145.27	*	ABL
WINFIELD (AL)	KC4RNF	147.64	147.04	*	NB
WINONA	N5DHS	146.37	146.97	N	A

220 MHZ

ACKERMAN	NM5D	223.22	224.82	N	
ACKERMAN	NM5D	223.18	224.78	N	
BAY ST. LOUIS	K0VNO	223.28	224.88	N	
BILOXI	K5TYP	222.90	224.50	N	
ELLISVILLE	N5DWU	222.80	224.40	*	PL
GLEN	KA5RPB	223.92	224.52	N	
PASCAGOULA	W5WA	222.72	224.32	*	
PONTOTOC	KE5ST	223.30	224.90	N	

440 MHZ

ACKERMAN	NM5D	448.65	443.65	N	
ACKERMAN	NM5D	449.90	444.90	N	
AMORY	KB5DSN	449.825	444.825	N	
CLERMONT HARBOR	WD5BJT	449.15	444.15	N	AL
CLINTON	KB5CO	449.60	444.60	*	
ELLISVILLE	N5DWU	448.90	443.90	*	AE
GAUTIER	KA5NOJ	439.25	426.25	*	V
GULFPORT	KA5CYR	449.25	444.25	*	ABE
HATTIESBURG	N5LRQ	448.55	443.55	*	
HICKORY FLAT	W4ZCD	449.625	444.625	N	
HORN LAKE	KE5ST	449.65	444.65	N	
INDIANOLA	AB5DU	449.85	444.85	N	
JACKSON	KB5LCL	449.45	444.45	N	T141.3
JACKSON	KB5II	449.00	444.00	*	
JACKSON	NC5Y	449.70	444.70	N	
JACKSON	KA5AGD	449.975	444.975	N	
LAUREL	AJ0X	448.50	443.50	N	ABER
MENDENHALL	K5HYE	448.60	443.60	*	B
MERIDIAN	KB5LTW	449.40	444.40	N	BER
MERIDIAN	WA5WUX	449.10	444.10	N	PEL
NATCHEZ	N5IAT	448.80	443.80	N	A
NEW ALBANY	WB5YCR	449.15	444.15	N	O
NEW HEBRON	N5MRS	449.525	444.525	N	A
POPLARVILLE	WA5WRE	449.85	444.85	*	
RICHTON	N5OCF	449.625	444.625	*	RP
SOUTHAVEN	N5PYQ	449.925	444.925	N	
STARKVILLE	W5VZF	449.75	444.75	*	PR
VICKSBURG	WB5TTE	449.925	444.925	N	PR
WINONA	N5EYM	449.95	444.95	N	

NORTH CAROLINA REPEATERS

10 METERS

BALD CREEK	N1BEC	29.56	29.66	N	
NEWPORT	K4GRW	29.56	29.66	N	PR
THOMASVILLE	KK4VO	29.58	29.68	*	PR
WILKESBORO	KC4XE	29.52	29.62	*	L
WILSON	WB4IUY	29.58	29.68	*	
WILSON	WD4IDA	29.54	29.64	*	C

6 METERS

BALD CREEK	N1BEC	52.03	53.03	N	
BOONE/RICH MTN.	WA4PXV	52.05	53.05	*	BLR
GASTONIA	N4XTF	52.11	53.11	*	ABELR
MARS HILL	WB4PLA	52.09	53.09	*	C
NEWPORT	K4GRW	52.01	53.01	N	PR
RALEIGH	W1IFL	52.19	53.19	N	
RALEIGH	WA4PEN	52.03	53.03	*	O
RALEIGH	WA4PEN	52.25	53.25	*	C B
ROCKY MOUNT	N4YTU	52.59	53.59	N	
SAURATOWN MT	N4QLX	52.21	53.21	N	
STATESVILLE	WA4WRS	52.67	53.67	N	C
THOMASVILLE	K4AZA	52.17	53.17	*	
THOMASVILLE	K4AZA	52.525	52.525	N	RB
WILSON	WB4IUY	52.07	53.07	*	

2 METERS

AHOSKIE	WA4ZGQ	146.31	146.91	*	P
AHOSKIE	WB4YNF	144.53	145.13	N	A
ALBEMARLE	K4OGB	146.385	146.985	*	A
ANDREWS/ROBBINSV	K4AIH	146.445	147.045	*	BELP
AQUADALE	WA4CHZ	147.99	147.39	*	A
ASHEBORO	KJ4AV	147.855	147.255	*	PL
ASHEVILLE	N4OOC	147.825	147.225	*	A
#ASHEVILLE	WB4PLA	146.235	146.835	N	UNCOORD.
ASHVL/MT PISGAH	WA4BVW	146.16	146.76	*	T151.4
ASHVL/SPIVEY MT	W4MOE	146.31	146.91	*	A
BAKERSVILLE	N4WXS	144.65	145.25	N	
BAKERSVILLE	KC4WPM	144.71	145.31	*	ABE
BALD CREEK	N1BEC	147.645	147.045	N	
BEULAVILLE	N4VBH	144.63	145.23	*	A
BOONE/RICH MTN.	WA4KDB	147.96	147.36	*	A
BREVARD	K4GBH	147.735	147.135	N	P
BROADWAY	KM4OX	147.705	147.105	N	
BURGAW	W4DLH	146.34	146.94	*	
BURLINGTON	K4FHB	146.07	146.67	*	AB
BURLINGTON	WA4HBQ	147.675	147.075	*	ABERT107.2
BURNSVILLE	N4YN	147.975	147.375	N	A
CARTHAGE	W4NIW	147.84	147.24	*	AEKP
CHARLOTTE	W4CQ	146.46	147.06	*	BE
CHARLOTTE	WA4AOS	144.75	145.35	N	L
CHARLOTTE	W4BFB	144.69	145.29	*	A
CHARLOTTE	W4BFB	144.63	145.23	*	
CHARLOTTE	WD4PLY	147.99	147.39	N	P
CHARLOTTE	W4BFB	146.34	146.94	*	A
CHERRY MT	WA4BKU	146.07	146.67	*	O
CHERRYVILLE	K4JTX	144.51	145.11	*	
CLAYTON	WB4IUY	147.99	147.39	*	ABE
CLINTON	WA4LZD	146.19	146.79	N	
COLUMBIA	KB4TOH	144.51	145.11	N	ABEL
CONCORD/KANNAP.	K4CEB	146.055	146.655	*	PB
CROWDERS MT/GAST	WD4PLY	144.85	145.45	N	
DUNN	N4CID	146.10	146.70	*	P
DURHAM	WD4LDB	147.96	147.36	*	ABE
DURHAM	WA4WTX	144.85	145.45	*	AL
DURHAM	WA4BFT	146.34	146.94	N	A
EDEN/STONEVILLE	WA4QBG	147.99	147.39	*	
ELIZABETH CITY	WA4VTX	146.055	146.655	N	A
FAYETTEVILLE	WA4FLR	146.445	147.045	N	Y
FAYETTEVILLE	N4EWG	146.205	146.805	*	
FAYVLLE/CFARS	WB4YZF	146.31	146.91	*	P
FAYVLLE/FT BRAGG	W4LPL	147.93	147.33	*	
FOREST CITY	K4PBG	147.84	147.24	*	AT123.0
FRANKLIN	W4ZCZ	144.89	145.49	N	
FRANKLIN	W4GHZ	147.84	147.24	*	T151.4
GAST/SPCR MT	W4REW	147.72	147.12	*	A
GASTONIA	N0IZF	146.205	146.805	*	ABELR
GIBSONVILLE	AC4DZ	144.89	145.49	*	ART103.5
GOLDSBORO	K4CYP	146.25	146.85	*	PT
GREENSBORO	KC4SJE	144.65	145.25	*	BEP
GREENSBORO	K4SNI	146.01	146.61	*	A
GREENSBORO	N4GGD	144.69	145.29	*	RP
GREENSBORO	W4BUZ	147.81	147.21	N	B
GREENSBORO	N4GGD	146.16	146.76	*	BEPR
GREENSBORO	N4QAA	144.71	145.31	N	AER
GREENSBORO	W4GG	147.63	147.03	*	PL
GREENVILLE	WD4JPQ	144.75	145.35	*	ABEL
GREENVILLE	K4ROK	147.975	147.375	*	A
GREENVL/ESTN NC .	W4GDF	147.69	147.09	*	
GRIFTON	W4NBR	146.085	146.685	*	
HENDERSONVILLE	WB4YAO	146.04	146.64	*	BLP
HENDSVL/BERWLW M	WA4KNI	144.67	145.27	*	A
HENDSVL/PENIC/MT	WA4KNI	147.855	147.255	*	A
HICKORY/BRT. MT	WA4MDW	146.25	146.85	N	
HIGH POINT	N4NNR	147.435	146.835	*	PL
HIGH POINT	WA4RIS	147.765	147.165	*	BP
HIGH POINT	N4XO	144.81	145.41	N	A
HILLSBOROUGH	WA4WTX	147.825	147.225	*	AL
JACKSONVILLE	WD4FVO	146.40	147.00	N	AE
JACKSONVILLE	WA4WGA	144.59	145.19	*	B
JEFFERSON	W4YJG	147.90	147.30	*	A
KINSTON	W4OIX	144.87	145.47	*	A
LAURINBURG	KI4RR	146.025	146.625	*	BEP
LENOIR	N4NIN	147.795	147.195	*	
LENOIR/HIBRITN	KN4K	147.93	147.33	*	
LEXINGTON	K4IZM	146.31	146.91	*	EP
LK NORMN/CLT	WB4KPF	147.615	147.015	N	P
LUMBERTON	KS4S	147.96	147.36	*	P
MACO	WA4LED	147.66	147.06	*	P

MORE NORTH CAROLINA REPEATERS

MADISON	KA4YFF	146.295	146.895	*	
MANTEO/WANCHESE	KC4VM	146.34	146.94	*	ALE
MARION	WD4PVE	146.385	146.985	N	A
MIDWAY	KM4AR	144.67	145.27	*	
MILLERS CREEK	N4GGN	146.115	146.715	*	A
MONROE	K4JCK	147.705	147.105	N	O
MONROE/UCARS	AB4DG	144.79	145.39	*	P
MORGANTON	K4VLY	147.75	147.15	*	
MOUNTAIN HOME	K4GHH	147.705	147.105	*	
MT AIRY	N4XRY	146.37	146.97	*	EP
MT AIRY	AC4NZ	146.34	146.94	*	T186.2
MT MITCHELL	WA4BVW	144.59	145.19	*	
MT. AIRY	KD4J	144.73	145.33	*	A
MURPHY	KC4WB	147.795	147.195	N	O
MURPHY/STALCUP	K4FOY	147.465	146.865	*	BT151.4
N. WILKESBORO	N4AGN	144.77	145.37	*	P
NAGS HEAD/BODIE	K4UOR	146.235	146.835	*	AE
NEW BERN	WD4JMS	146.01	146.61	*	AL
NEWPORT	K4GRW	144.85	145.45	N	A
NEWTON	AG4L	147.675	147.075	*	ABER
NEWTON/ANDSN MT	W4ZQB	144.57	145.17	*	
OXFORD	AC4UO	144.57	145.17	N	P
OXFORD	WA4MII	144.77	145.37	*	
PIKEVILLE	KK4YP	144.73	145.33	*	C
RALEIGH	K4BWC	144.89	145.49	*	BY
RALEIGH	WB4TQD	146.28	146.88	*	L
RALEIGH	WB4TQD	147.75	147.15	*	P
RALEIGH	K4BWC	146.13	146.73	*	PB
RALEIGH	W4DW	146.04	146.64	*	ABE
RALEIGH	N4BQF	144.67	145.27	N	PL
RALEIGH BENSON	AK4H	147.87	147.27	N	BEP
RANDLEMAN/GBO	WD4CVM	144.55	145.15	*	L
RED SPRINGS	W4MZP	147.90	147.30	*	P
REIDSVILLE	K4YEC	146.25	146.85	*	L
ROANOKE RAPIDS	93	147.63	147.03	*	BP
ROARING GAP	WB4PZA	146.22	146.82	*	
ROCKINGHAM	WD4AVP	146.355	146.955	*	ABE
ROCKY MOUNT	WN4Z	147.72	147.12	N	PE
SALISBURY	W4EXU	146.13	146.73	*	ELR
SANFORD	WB4EJJ	147.78	147.18	N	A
SAURATOWN MT	W4RXG	144.51	145.11	*	Y
SAURATOWN MT	W4NC	144.87	145.47	*	B
SAURATOWN MT	K4JYH	147.915	147.315	*	BP
SAURATOWN MT	N4QDK	146.19	146.79	N	EP
SELMA	KK4YP	147.615	147.015	*	C ABE
SHALLOTTE	K4PPD	144.77	145.37	*	PE
SHALLOTTE	K4PPD	147.915	147.315	*	BEP
SHALLOTTE	N4FAU	147.99	147.39	*	BEP
SHELBY	W4NYR	146.28	146.88	*	
SHELBY	W4NYR	147.945	147.345	*	P
SMITHFIELD	KD4JQ	146.37	146.97	*	A
SOUTHPORT	K4JYH	146.175	146.775	*	
SPARTA/GREEN MT	K4ITL	144.83	145.43	N	L
SPRING LAKE	WB4KDC	146.115	146.715	N	
STATESVILLE	WA1EHL	146.085	146.685	*	PE
STATSVL/ASBRY MT	WA1EHL	147.645	147.045	*	Y
SWANSBORO	KO4S	146.16	146.76	*	A
TABOR CITY	W4DCD	147.975	147.375	N	ALR
THOMASVILLE	K4AZA	146.40	147.00	*	LA
TRENTON	WB4TQD	144.61	145.21	*	L
TRYON/MELROSE MT	WB4SFK	147.78	147.18	N	C
TUCKASEGEE	W8OMV	147.90	147.30	N	
WADESBORO	W4USH	146.235	146.835	*	A
WASHINGTON	WA4TEP	147.945	147.345	*	A
WAXHAW	WA4ZRS	147.465	146.865	N	P
WAYNESVILLE	N4SM	147.87	147.27	*	A
WHITEVILLE	K4MSD	147.81	147.21	*	AL
WILLIAMSTON	KA4KNU	144.81	145.41	*	ABL
WILMINGTON	N4CTJ	147.78	147.18	N	AL
WILMINGTON	KM4GN	147.735	147.135	N	
WILMINGTON	W4VNK	146.13	146.73	*	AB
WILMINGTON	K4GMP	146.22	146.82	*	BL
WILSON	WB4THL	146.16	146.76	*	A
WINSTON-SALEM	W4NC	146.04	146.64	*	ABL
YADKINVILLE	N4XRY	146.415	147.015	*	
YAUPON BEACH	W4RPC	146.07	146.67	*	

220 MHZ

ANDREWS/ROBBINSV	K4AIH	223.28	224.88	*	TL
ARCHDALE	KC4HTS	223.22	224.82	*	R
ASHEVILLE	N4TFU	223.14	224.74	N	BL
ASHEVILLE	NC4N	223.00	224.60	*	
ASHVL/MT PISGAH	WA4BVW	222.66	224.26	*	
BALD CREEK	N1BEC	222.52	224.12	N	
CANTON	N4DWU	223.22	224.82	*	P
CHARLOTTE	W4BFB	222.80	224.40	*	A
CHERRYVILLE	K4JTX	223.36	224.96	*	
EDEN	WA4WGY	223.18	224.78	*	ABER
FAYETTEVILLE	W4EHF	222.96	224.56	N	
FAYETTEVILLE	W4EHF	222.42	224.02	*	L
GOLDSBORO	AA3CH	223.36	224.96	*	ELPT156.7
GREENSBORO	WB4WOR	222.54	224.14	*	K
GRIFTON	WA4DAN	223.24	224.84	*	L
GRIMESLAND	WB4PAC	222.76	224.36	N	
HENDERSONVILLE	N4UQS	223.36	224.96	*	
HENDSVL/BERWLW M	WA4KNI	222.64	224.24	*	
HIGH POINT	N4NNR	223.00	224.60	*	AL
HILLSBOROUGH	WA4WTX	222.66	224.26	*	L
JACKSONVILLE	WA4WGA	222.72	224.32	*	C
LENOIR/HIBRITN	KN4K	222.56	224.16	*	
LINWOOD	KA4HUV	222.38	223.98	N	
LK NORMN/CLT	WB4KPF	223.08	224.68	N	
LOCUST	WA4ZIA	222.88	224.48	*	PL
MARS HILL	WB4PLA	223.06	224.66	*	L
MARSHALL	KA4TYO	222.76	224.36	N	
MORGANTON	WB4PML	223.20	224.80	N	
MT MITCHELL	WA4BVW	222.94	224.54	*	
OXFORD	AC4UO	223.14	224.74	N	
RALEIGH	W1IFL	223.32	224.92	N	
RALEIGH	WA4PEN	223.04	224.64	*	LP
ROCKY MOUNT	KC4FKC	222.98	224.58	*	AB
ROCKY MOUNT	NF4C	222.62	224.22	*	AR
SALISBURY	W4EXU	223.16	224.76	*	L
SAURATOWN MT	WA4YHH	222.98	224.58	*	
SAURATOWN MT	W4RXG	223.10	224.70	*	OY
SAURATOWN MT	WA4WTB	223.36	224.96	*	
SAURATOWN MT	W4RXG	223.28	224.88	*	O
SHELBY	KC4ZTJ	222.86	224.46	*	
SHELBY	W4NYR	222.46	224.06	*	
SPINDALE	KC4IEV	222.84	224.44	*	CT146.3
STATESVILLE	WA4PVI	222.70	224.30	N	
SUNSET BEACH	AC4AM	223.06	224.66	N	
THOMASVILLE	K4AZA	222.74	224.34	N	LA
TRENTON	WA4DAN	223.12	224.72	*	
WILMINGTON	KM4GN	222.60	224.20	N	
WILMINGTON	K4YNY	222.90	224.50	N	LR
WINSTON-SALEM	WA4YHH	223.04	224.64	*	RP

440 MHZ

AHOSKIE	WB4YNF	449.20	444.20	N	T
ANDREWS/ROBBINSV	K4AIH	448.65	443.65	*	BLT
ARCHDALE	KC4SVQ	448.30	443.30	N	AR
ASHEBORO	KQ4ML	449.975	444.975	*	C
ASHEVILLE	N4DWT	449.90	444.90	*	
AUBURN	N4ZCM	447.275	442.275	*	
BAKERSVILLE	KM4GR	447.75	442.75	*	C
BALD CREEK	N1BEC	449.875	444.875	N	
BOONE/RICH MTN	WA4PXV	448.575	443.575	*	BLR
BOSTIC	KC4YOQ	449.125	444.125	*	
BURLINGTON	AC4DZ	448.025	443.025	*	AT107.2
CHAPEL HILL	KZ1X	448.475	443.475	*	BCLT
CHARLOTTE	W4PPN	439.25	421.25	*	V
CHARLOTTE	K4DIL	449.675	444.675	*	
CHARLOTTE	W4BFB	449.60	444.60	*	
CHARLOTTE	W4CQ	449.85	444.85	*	
CHARLOTTE	W4CQ	449.45	444.45	*	A
DALLAS/CHARLOTTE	WA1WXL	449.95	444.95	*	BLT136.5
DENVER/CLT	KA4YMY	449.70	444.70	*	BL
DURHAM	WA4WTX	449.10	444.10	*	AL
EDEN	WA4WGY	448.975	443.975	*	
FAYETTEVILLE	WB4YZF	449.40	444.40	*	
FOREST CITY	KC4YOQ	449.40	444.40	*	
GASTONIA	WB4VTE	449.55	444.55	*	
GASTONIA	N0IZF	449.15	444.15	*	ABELR
#GASTONIA/CROWDE	N0IZF	449.75	444.75	*	UNCOORD.
#GASTONIA/CROWDE	KC4YOT	448.75	443.75	*	UNCOORD.
GIBSONVILLE	WC3V	449.35	444.35	N	C
#GOLDSBORO	KK4YP	448.00	443.00	*	UNCOORD.
GOLDSBORO	AA3CH	448.05	443.05	*	ELT156.7
GREENSBORO	WD4PQZ	448.50	443.50	*	ALR
GREENSBORO	WB4GUG	447.225	442.225	*	
GREENSBORO	WB4WOR	449.30	444.30	*	BEP
GREENVILLE	AI4J	449.80	444.80	N	
#HAMLET	WA4ZIA	448.20	443.20	*	UNCOORD.
HAW RIVER	KD4JFN	448.775	443.775	*	ABER
HAW RIVER	K2MZ	448.875	443.875	N	T
HENDSVL/BERWLW M	WA4KNI	449.25	444.25	*	
HICKORY	K4JEQ	449.00	444.00	N	
HIGH POINT	N4LXW	448.70	443.70	N	
HIGH POINT	KB4JIF	448.90	443.90	*	B
JACKSONVILLE	WA4WGA	449.675	444.675	*	C
KANNAPOLIS	N4JEX	448.25	443.25	N	
KING/SAURATOWN M	WA4YHH	449.775	444.775	*	T103.5
LEVEL CROSS	N4NCJ	449.025	444.025	*	A
LEXINGTON	WD4ICX	449.50	444.50	N	
LOCUST	WA4LBT	448.70	443.70	*	PL
LUMBERTON	WB4DVN	449.625	444.625	N	B
#MARSHALL	KC4KPW	448.00	443.00	N	UNCOORD.
#MARSHALL	KC4KPW	447.00	442.00	N	UNCOORD.
MIDDLESEX	NE4J	449.65	444.65	*	
MT AIRY/FSH PK	KF4UY	449.825	444.825	*	ABLR
MT MITCHELL	N4DWU	448.60	443.60	*	
MT. AIRY	N4XRY	449.925	444.925	*	
MURPHY	N4USU	447.60	442.60	N	T151.4
NEW BERN	WD4JMS	449.90	444.90	*	B
OXFORD	AC4UO	449.60	444.60	N	
PITTSBORO	WB4MMY	447.55	442.55	*	PT
POLKVILLE	KC4ZTJ	449.975	444.975	*	P
RALEIGH	WA4PEN	449.525	444.525	*	PL
RALEIGH	N4ZCM	448.225	443.225	*	BPT
RALEIGH	W4ATC	449.775	444.775	N	
RALEIGH	W4DW	449.95	444.95	*	A
RALEIGH	N4BEA	447.15	442.15	N	L
RALEIGH	N4LMR	447.45	442.45	N	P
RALEIGH	W4DW	449.875	444.875	*	O
RALEIGH	W1IFL	448.375	443.375	N	
REIDSVILLE/EDEN	K4YEC	449.80	444.80	*	
ROANOKE RAPIDS	KK4VM	449.55	444.55	N	AO
ROARING GAP	KC4XE	448.55	443.55	*	L
ROCKY MOUNT	N4JEH	449.70	444.70	N	BP
#ROCKY MT	WB4WAA	449.00	444.00	*	UNCOORD.
SALISBURY	N4MME	449.65	444.65	*	AT
SALISBURY	K0SD	449.575	444.575	N	A
SALISBURY	W4HG	448.15	443.15	*	ABT
SAURATOWN MT	N4GGC	448.10	443.10	*	L
SAURATOWN MT	K4AZA	439.25	421.25	*	OV
SAURATOWN MT	WA4WTB	448.40	443.40	*	C
SELMA	KK4YP	449.00	444.00	*	BP
SHELBY	W4NYR	439.25	427.25	*	V
SMITHFIELD	KD4BFI	449.25	444.25	N	
SPINDALE	KC4IEV	448.30	443.30	*	T123.0
STATESVILLE	N4VOZ	448.45	443.45	*	O A
SUNSET BEACH	AC4AM	447.625	442.625	N	
TAYLORSVL/BARR M	K4OLC	449.05	444.05	*	BC
THOMASVILLE	K4AZA	447.90	442.90	*	L
WEST JEFFERSON	WA4PXV	447.375	442.375	*	C
WILMINGTON	K4YNY	447.500	442.500	N	ALR
WILMINGTON	K4GMP	449.85	444.85	*	B
WILMINGTON	KM4GN	447.20	442.20	N	P
WILMINGTON	KM4GN	449.20	444.20	N	
WILSON	NE4J	449.90	444.90	*	L
WINSTON-SALEM	N4QDK	449.725	444.725	N	A
WINSTON-SALEM	W4NC	449.275	444.275	*	C
YADKINVILLE	N4AAD	447.80	442.80	*	A
YANCEYVILLE	N4VWK	449.225	444.225	N	A
YAUPON BEACH	W4RPC	448.40	443.40	*	C

1270 MHZ

#CHARLOTTE	W4PPN	1277.25	1253.25	*	UNCOORD.
CHARLOTTE	KA4YMY	1271.95	1291.95	*	
#GASTONIA/CROWDE	N0IZF	1272.82	1292.82	*	UNCOORD.

SOUTH CAROLINA REPEATERS

10 METERS

RKY RDG/WALLACE	KA4ABW	29.60	RMT.BS	*	R

6 METERS

PICKENS	WB4YXY	52.41	53.41	N	

2 METERS

AIKEN	N4ADM	147.885	147.285	*	P
AIKEN	W4TUN	144.57	145.17	N	A
ANDERSON	N4SZ	146.37	146.97	*	BP
ANDERSON/SAS MT	W4FVV	146.19	146.79	*	B
AWENDAW	K4ESG	146.16	146.76	N	BPT
AWENDAW	K4ESG	147.90	147.30	N	PT103.5
BAMBERG	WA4DFP	144.73	145.33	*	
BARNWELL	WA4FOF	147.63	147.03	*	B
BEAUFORT	KB4GY	144.71	145.31	*	
BOWMAN	KC4NXU	144.79	145.39	N	
CHARLESTON	WA4USN	146.19	146.79	*	
CHARLESTON	WB4UIV	144.65	145.25	*	
CHARLESTON	WB4LET	147.87	147.27	N	PL
CHARLESTON	KD4PBC	146.34	146.94	N	BL
CHARLESTON	KC4UDD	146.235	146.835	*	ABL
CHERAW	KA4ABW	147.735	147.135	N	AE
CHESTER	AC4IP	146.025	146.625	N	CLOSED-T
COLUMBIA	KB4HE	146.40	147.00	N	BLPT
COLUMBIA	WB4NEP	146.115	146.715	N	P
COLUMBIA	N4NUY	147.93	147.33	*	
COLUMBIA	N4EOY	147.96	147.36	N	L
COLUMBIA	KC4GYM	146.175	146.775	*	BLPT156.7
CONWAY	WD4JMT	144.51	145.11	*	BE
DILLON/PEE DEE	NN4N	146.145	146.745	*	
DORCHESTER	W4NAT	147.78	147.18	N	
FLORENCE	W4PNZ	147.795	147.195	N	B
FLORENCE	W4ULH	146.25	146.85	*	A
FLORENCE	WA4ISM	146.37	146.97	*	A
FT MILL/CAROWND	AA4SC	147.78	147.18	N	
GAFFNEY	KN4RG	144.87	145.47	*	B
GASTON	WB4NEP	144.61	145.21	N	P
GEORGETOWN	WD4DMI	147.975	147.375	N	
GREENVILLE	K4LEO	147.975	147.375	N	T

MORE SOUTH CAROLINA REPEATERS

GREENVILLE	W4IQQ	146.34	146.94	*	T
GREENWOOD	K4VIA	147.765	147.165	*	BP
GREENWOOD/HODGES	KB4CS	144.53	145.13	N	
GRNVLE/CSRS HD	W4NYK	146.01	146.61	*	
GRNVLE/PARIS MT	W4NYK	146.22	146.82	*	P
HILTON HEAD	W4ILN	147.84	147.24	*	
INMAN	WD8OXE	144.55	145.15	*	P
LANCASTER	W4PAX	146.10	146.70	*	
LANCASTER	AC4VT	147.84	147.24	*	
LAURENS	KB4YF	146.265	146.865	*	
LEXINGTON	KB4HE	146.64	147.00	N	BL
LEXINGTON	KA4FEC	147.99	147.39	*	B
LITTLE MT.	K4AVU	147.81	147.21	N	
MARION	W4YLT	146.40	147.00	N	E
MONCKS CORNER	KA4BJM	147.75	147.15	N	
MYB BCH/BRKSVIL	W4DCD	147.885	147.285	N	AL
MYRTLE BEACH	WA4DDK	144.87	145.47	N	T
MYRTLE BEACH	WD4JMT	147.72	147.12	*	BER
N. AUGUSTA	K4FKJ	146.13	146.73	*	
N. MYRTLE BEACH	K4HOG	147.63	147.03	*	B
N. SPARTANBURG	N4UZT	147.915	147.315	*	ABT141.3
NEWBERRY	KB4CO	146.085	146.685	N	
ORANGEBURG	KC4WIF	146.28	146.88	*	ABL
ORANGEBURG	KM4RP	147.69	147.09	N	
ORANGEBURG	WM3O	146.205	146.805	N	C
PAGELAND/HIPOINT	KA4ABW	146.295	146.895	*	ABLR
PICKENS	WB4YXZ	146.40	147.00	N	
RKY RDG/WALLACE	KA4ABW	144.89	145.49	*	A
ROCK HILL	K4YTZ	146.43	147.03	N	P
ROCK HILL	AA4PF	144.71	145.31	*	PL
SANTEE	W4DTW	147.825	147.225	N	AB
SENECA/LONG MT	WA4JRJ	147.87	147.27	*	BEP
SIMPSONVILLE	WA4SDT	147.75	147.15	N	Y
SIMPSONVILLE	WD4BJY	146.13	146.73	*	
SPARTANBURG	K4JLA	147.69	147.09	*	A
ST. MATTHEWS	AD4U	146.07	146.67	N	ABLRT131.8
SUMMERTON	N4LWY	144.55	145.15	N	P
SUMTER	WB4KIV	146.04	146.64	*	
SUMTER	WB4KIV	144.53	145.13	N	
#SUMTER	WA4UMU	147.615	147.015	*	UNCOORD.
SUMTER/SHAW	W4VFR	147.66	147.06	N	A
WEST COLUMBIA	KC4GYM	144.67	145.27	*	BLP
WEST COLUMBIA	KC4GYM	144.83	145.43	*	P
WHITE HALL	W4BWZ	146.31	146.91	*	B
WHITE OAK MTN	WD4MGM	147.885	147.285	N	

220 MHZ

AIKEN	W4TUN	223.36	224.96	N	TA
CHARLESTON	KA4NRL	222.58	224.18	N	BP
COLUMBIA	KC4SWI	223.04	224.64	N	BP
COLUMBIA	N4EOY	223.30	224.90	N	LR
CROSS	KB4VFD	222.98	224.58	*	CA
FLORENCE	N4JJ	223.34	224.94	N	BP
GREENVILLE	W4ILY	222.60	224.20	*	A
LITTLE MTN	K4RWN	222.92	224.52	N	PB
ORANGEBURG	KO4BR	223.18	224.78	N	BP
PICKENS	WB4QHF	222.80	224.40	*	BP
PICKENS/CSRS HD	WB4QHF	222.54	224.14	*	LR
PICKENS/SASFR MT	KJ4X	222.72	224.32	N	B
ROPER MT/GRNVL	W4NYK	223.32	224.92	*	
SUMTER	K4GYR	223.26	224.86	*	
SUMTER/SHAW	W4VFR	223.06	224.66	N	
WEST SPRINGS	KN4CW	222.84	224.44	N	BP

440 MHZ

AIKEN	W4TUN	448.40	443.40	N	TA
ANDERSON/SAS MT	WD4BUH	449.925	444.925	*	BO
CHARLESTON	N4MNH	449.30	444.30	*	AB
CHARLESTON	KD4PBC	449.95	444.95	N	BL
COLUMBIA	N4EOY	448.00	443.00	N	LR
COLUMBIA	KC4GYM	442.10	447.10	*	BT156.7
CROSS	KB4VFD	447.30	442.30	*	CA
FLORENCE	N4JJ	449.00	444.00	N	B
GAFFNEY	KN4RG	449.80	444.80	*	C
GEORGETOWN	WD4JMT	449.925	444.925	N	AB
GREENVILLE	KB4PQA	447.25	442.25	*	BRP
GRNVLE/PARIS MT	ND4N	448.35	443.35	*	P
LANCASTER	N4MZL	449.10	444.10	N	A
LAURENS	WD4CWY	448.775	443.775	*	BT
LEXINGTON	N4GUP	439.25	421.25	*	V
MYB BCH/BRKSVIL	W4DCD	449.525	444.525	N	ALR
MYR BCH/CONWAY	WD4JMT	449.675	444.675	*	ABT203.5
NORTH CHARLESTON	KC4UDD	449.60	444.60	*	AB
ORANGEBURG	WM3O	449.975	444.975	N	AB
PICKENS/CSRS HD	WB4QHF	447.40	442.40	*	
SUMMERVILLE	WA4HNK	448.80	443.80	*	EP
SUMTER	K4GYR	449.50	444.50	*	P
SUMTER	WA4UMU	439.25	423.25	N	V
#WEST COLUMBIA	KC4GYM	449.20	444.20	*	UNCOORD.

**This SERA Official
Repeater Index Reflects
Changes thru April 19, 1993**

TENNESSEE REPEATERS

10 METERS

GREENEVILLE	WB4NKM	29.54	29.64	*	
JACKSON	NQ4W	29.54	29.64	N	C
MEM/FISHERVILLE	N4DRL	29.58	29.68	N	ALR
MEMPHIS	W4ZJM	29.52	29.62	*	BLT*#
NASHVILLE	WA4BZU	29.54	29.64	N	TLO
UNION CITY	WA4YGM	29.56	29.66	*	O

6 METERS

CHATTANOOGA	WB4LRD	52.01	53.01	N	
COOKEVILLE	WA4UCE	52.19	53.19	N	
GALLATIN	WD4KWP	52.45	53.45	N	L
GREENEVILLE	WB4NKM	52.01	53.01	*	
GUTHRIE (TN/KY)	KA4ZKL	52.23	53.23	N	
KNOXVILLE	WA4YON	52.25	53.25	N	
KNXVL/ENG MT	WB4IOB	52.15	53.15	*	A
MEM/FISHERVILLE	N4DRL	52.27	53.27	N	LRT
MEMPHIS	WA4KOG	52.01	53.01	N	
MEMPHIS	K4RDK	52.55	53.55	N	
MORRISTOWN	KD4LP	52.23	53.23	*	
NASHVILLE	N4ARK	52.525	145.21	*	BR
OAK RIDGE	WD4GYN	52.11	53.11	*	

2 METERS

ALAMO	WB4EDS	147.735	147.135	N	
ALCOA	N4RYR	146.055	146.655	*	ABE
ANDERSON CTY	WB4KUD	146.10	146.70	*	AB
ATHENS	WA4PNI	144.71	145.31	*	T141.3
BENTON	K4SIR	144.85	145.45	N	T
BLOUNTVILLE	WA4KMG	147.60	147.00	N	B
BLUFF CITY	KA4ZTK	147.885	147.285	N	BE
BRISTOL	WD4CYZ	146.28	146.88	N	
BRISTOL	WB4DKI	146.07	146.67	*	A
BRISTOL/HLSTN MT	K4LSP	146.16	146.76	N	A
BROWNSVILLE	KB4YTU	144.83	145.43	N	PL
BROWNSVILLE	K4OKV	146.055	146.655	*	AB
CARTHAGE	N4OTT	144.59	145.19	*	
CHATT/SIGNAL MT	W4AM	146.055	146.655	N	O
CHATTANOOGA	W4AM	146.19	146.79	*	A
CHATTANOOGA	K4CMY	146.01	146.61	*	
CHATTANOOGA	K4CMY	144.53	145.13	*	
CHATTANOOGA	K4VCM	144.69	145.29	*	
CHATTANOOGA	W4AM	144.79	145.39	*	A
CLARKSVILLE	WD4SGA	147.60	147.00	N	
CLARKSVILLE	AA4TA	147.99	147.39	N	A
CLEVELAND	W4GZX	146.31	146.91	*	A
CLEVELAND	WD4DES	147.78	147.18	*	A
COLLEGEDALE	KE4QS	147.60	147.00	*	BP
COLLIERVILLE	KB4YGI	147.63	147.03	N	
#COLLIERVILLE	NU5O	144.53	145.13	*	UNCOORD.
COLLINWOOD TN	KM4ME	146.055	146.655	N	
COLUMBIA	WA4ZYX	147.72	147.12	*	AB
COOKEVILLE	K4HKZ	147.645	147.045	N	C
COOKEVILLE	N4WS	147.81	147.21	*	AER
COOKEVILLE	NQ4Y	144.51	145.11	N	
COOKEVILLE	WA4UCE	144.83	145.43	N	A
COVINGTON	WA4VXW	147.93	147.33	N	PLK
COVINGTON	WA4KOG	144.85	145.45	N	PR
#CROSSVILLE	AC4AA	147.465	146.865	*	UNCOORD.
CUMBERLAND CITY	WD4DBJ	144.73	145.33	*	
DAYTON/RHEA CTY	K4PHT	147.99	147.39	*	B
DECATUR-PONE KB	W4RJC	144.55	145.15	N	
#DICKSON	KN4HL	147.975	147.375	*	UNCOORD.
DOVER	N4VIH	144.81	145.41	N	
DYERSBURG	WB4RCK	146.145	146.745	N	
ERWIN	WB4BRV	144.65	145.25	N	BPT
ERWIN/UNICOI CO	WB4BRV	147.765	147.165	*	BP
FAYETTEVILLE	KO4G	146.265	146.865	N	
FAYETTEVILLE	W4NIQ	147.63	147.03	N	BP
FISHERVILLE	N4DRL	144.65	145.25	N	ABEL
FRANKLIN	KK4IY	146.385	146.985	N	
FRUITLAND	NU5O	146.175	146.775	*	BLT107.2
GALLATIN	WA4YQC	147.87	147.27	*	BLPT114.8
GALLATIN	N4SSB	144.53	145.13	*	T107.2
GALLATIN	WD4BKY	147.84	147.24	*	BLT114.8
GERMANTOWN	KA4ATI	147.69	147.09	N	
GRAND JUNCTION	N4DRL	147.63	147.03	N	
GRANDJUNCTION	N4DRL	146.43	147.03	N	
GRAY	WD4SBX	144.51	145.11	*	
GRAY/HOLSTON MT	WD4SBX	147.81	147.21	*	T103.5
GREENBRIER	WQ4E	147.675	147.075	N	B
GREENEVILLE	K4EPC	144.79	145.39	*	
GREENEVILLE	WB4NKM	144.81	145.41	*	
GRNVLE/VIKING MT	KB4UG	147.66	147.06	N	R
GTLBG/COVE MTN	WA4KJH	146.25	146.85	*	LE
GUTHRIE (TN/KY)	KA4NNE	146.205	146.805	N	
HENDERSON	K4TC	147.705	147.105	*	PE
HENDERSONVILLE	K4UVH	147.945	147.345	N	
HENDERSONVILLE	WB4WZK	144.67	145.27	*	PT
HOHENWALD	KE4KO	144.85	145.45	N	
HUMBOLDT	NQ4Y	144.75	145.35	N	AL
JACKSON	KF4SC	144.71	145.31	N	A
JACKSON	WB7BOX	144.51	145.11	N	AL
JACKSON	W4WKZ	147.81	147.21	N	A
JAMESTOWN	K4NLP	147.69	147.09	*	
JASPER	KD4XX	144.59	145.19	*	A
JOHNSON CITY	KE4FH	147.87	147.27	N	A
JOHNSON CITY	W4ABR	146.19	146.79	*	BP
JOHNSON CITY	WB4SQC	144.69	145.29	*	BP
KNGSPT/BAYS MT	W4TRC	146.37	146.97	*	BP
KNOXVILLE	N4GRC	144.77	145.37	*	
KNOXVILLE	WB4GBI	146.34	146.94	*	
KNOXVILLE	WA4TEM	144.73	145.33	*	ABER
KNOXVILLE	KA4AZQ	147.795	147.195	*	BT100.0
KNOXVILLE	W4BBB	147.90	147.30	*	
KNOXVILLE	WB4GBI	144.87	145.47	*	
KNOXVILLE	WB4GBI	144.57	145.17	*	
KNOXVILLE	WB4GBI	146.025	146.625	*	
KNOXVILLE	N4IUA	144.83	145.43	N	
KNOXVILLE	WB4GBI	147.675	147.075	*	A
KNOXVILLE	W4BBB	144.61	145.21	*	A
KNOXVILLE	KN4QB	144.51	145.11	*	
KNOXVILLE	KA4AZQ	146.40	147.00	*	BT100.0
KNXVL/ENG MT	WB4IOB	146.13	146.73	*	
LAFAYETTE	KC4ECD	144.71	145.31	*	ET
LAFOLLETTE	KA4OAK	144.53	145.13	N	A
LAFOLLETTE	KA4OAK	147.96	147.36	N	
LAFOLLETTE/WMT	K4BGW	146.07	146.67	*	
LAKE CITY	WB4OAH	146.22	146.82	N	A
LAVERNE	KJ4RA	144.63	145.23	N	
LEBANON	WD4JVV	147.615	147.015	N	
LEBANON	WB4DOR	144.79	145.39	N	
LEXINGTON	WD4MVR	146.43	147.03	N	
MANCHESTER	W4UOT	146.10	146.70	N	A
MARTIN	N4ABU	146.025	146.625	*	A
MAYNARDVILLE	KB4KIE	144.63	145.23	N	E
MCMINNVILLE	WD4MWQ	146.37	146.97	N	P
MCMINVL/SHT MT	WB4LHO	144.89	145.49	N	
MCNAIRY	NU5O	147.675	147.075	*	BLT107.2
MEDINA	WA4RWK	146.37	146.97	N	AB
MEM/FISHERVILLE	N4DRL	144.73	145.33	N	ABL
MEMPHIS	K0JXI	144.55	145.15	N	
MEMPHIS	WA4ETE	146.28	146.88	*	AL
MEMPHIS	WA4KOG	146.25	146.85	N	A
MEMPHIS	WA4HBY	146.19	147.51	N	NB
MEMPHIS	WB4DAZ	146.13	146.73	*	P
MEMPHIS	WA4KOG	144.89	145.49	N	
MEMPHIS	WA4ADT	147.90	147.30	*	PL
MEMPHIS	WA4MQQ	147.66	147.06	N	
MEMPHIS	W4ZJM	146.40	147.00	*	BLT*#
#MEMPHIS	WB4KQQ	146.04	146.64	N	UNCOORD.
MEMPHIS	KA0BRN	144.57	145.17	N	ALT
MEMPHIS	N4BSM	146.34	146.94	N	A
MEMPHIS	W4BS	146.22	146.82	*	P
MEMPHIS	KA4GMV	147.72	147.12	N	AT
MEMPHIS	WA4KOG	147.78	147.18	N	
MONTEAGLE	N4SSB	144.81	145.41	*	LTO
MORGAN COUNTY	WD4ORB	147.93	147.33	*	
MORRISTOWN	KD4LP	147.63	147.03	*	E
MORRISTOWN	WB4OAH	147.825	147.225	N	A
MORRISTOWN	KD4LP	144.85	145.45	*	B
MOUNTAIN CITY	WD4OMO	144.87	145.47	N	
MURFREESBORO	WB4LHO	144.57	145.17	N	
NASHVILLE	WB4NTM	147.96	147.36	*	ATL
NASHVILLE	N4TK	146.25	146.85	*	PT114.8
NASHVILLE	WA4TOA	146.28	146.88	*	PT114.8
NASHVILLE	W4PQP	146.16	146.76	N	
NASHVILLE	K4ZGA	147.78	147.18	*	ABT
NASHVILLE	K4AYN	147.645	147.045	N	
NASHVILLE	W4SQE	146.19	146.79	*	
NASHVILLE	WA4PCD	147.75	147.15	N	
NASHVILLE	WA4PCD	146.01	146.61	N	P
NASHVILLE	N4ARK	144.61	52.525	*	BLR
NASHVILLE	N4ARK	144.87	145.47	*	BP
NASHVILLE	WA4BZU	147.855	147.255	N	TP
NASHVILLE	WA4PCD	146.34	146.94	N	
NASHVILLE	N4ARK	144.61	145.21	*	BLR
NASHVILLE	WB4ZSA	147.90	147.30	N	P
NASHVILLE W	WB4NTM	146.07	146.67	*	ATL
NASHVILLE W	WB4NTM	146.04	146.64	*	AT
NASHVLE/FAIRVIEW	N4ARK	144.51	145.11	*	B
NOLENSVILLE	WD4JYD	144.75	145.35	N	
OAK RIDGE	K4EAJ	147.72	147.12	*	
OAK RIDGE	W4SKH	146.28	146.88	N	
OAK RIDGE	K4EAJ	147.75	147.15	*	LT
OAK RIDGE	W4SKH	146.37	146.97	N	A

MORE TENNESSEE REPEATERS

OAKFIELD	WA4BJY	147.99	147.39	N	PRT
OLIVER SPRINGS	AA4UP	146.145	146.745	*	
PARIS	K4KLX	147.96	147.36	N	A
PETROS/FRZ HD MT.	KJ4SI	147.855	147.255	*	BEP
PIKEVILLE	K4PUX	147.885	147.285	*	
PINSON	WB0TMC	147.87	147.27	N	C
POCAHONTAS	WB4MMI	144.65	145.25	N	
PULASKI/MUSIC MT	WB4OYG	146.175	146.775	*	E
PURYEAR	WA4CEX	147.765	147.165	N	
RAMER	WB4MMI	146.10	146.70	N	
RIDGETOP	WD4FFM	144.69	145.29	N	
ROCKWOOD/MT ROOS	AA4KS	147.615	147.015	*	ABER
#ROCKWOOD/MT ROO	KA4QYI	146.04	146.64	*	UNCOORD.
ROGERSVILLE	KD4HZN	147.915	147.315	N	AB
SALTILLO	KB4JUB	146.115	146.715	N	
SAVANNAH	WB4DQU	146.31	146.91	N	
SEV/SHIELDS MT	N4CJX	144.67	145.27	N	
#SHELBYVILLE	W4QEB	147.66	147.06	N	UNCOORD.
#SHELBYVILLE	KC4KRM	144.53	145.13	*	UNCOORD.
SHOP SPRINGS	N4IDG	147.705	147.105	*	ELPT100
SHORT MTN	W4YXA	146.31	146.91	N	
SMITHVILLE	KI4OG	144.77	145.37	N	ALT
SPRING HILL	NW4E	144.85	145.45	N	A
SULPHUR SPRINGS	WD4OBW	146.325	146.925	*	CL
TRENTON	KN4KP	146.265	145.865	N	AENB
UNION CITY	WA4YGM	146.10	146.70	*	A
UNION CITY	WA4YGM	147.615	147.015	*	OAR
WALLAND	KB4PIO	146.085	146.685	N	BP
WATERTOWN	N4IDG	146.235	146.835	*	LP
WATERTOWN	KE4WA	146.13	146.73	N	T100
WINCHESTER	W4SFF	146.22	146.82	N	A

220 MHZ

BLOUNTVILLE	WA4KMG	222.60	224.20	N	B
BROWNSVILLE	KB4YTU	222.60	224.20	N	PL
CHATT/SIGNAL MT.	WA4ZOK	223.30	224.90	N	
CHATTANOOGA	K4VCM	223.18	224.78	*	
CLARKSVILLE	KF4GP	222.34	223.94	N	
CLEVELAND	KK4US	222.72	224.32	N	AB
CLINCH MTN	KC4RGQ	223.04	224.64	*	ABL
COLLIERVILLE	KB4YGI	222.80	224.40	N	PL
COLUMBIA	KE4KO	223.12	224.72	N	
FISHERVILLE	N4DRL	223.28	224.88	N	AL
FRANKLIN	WD4SGS	222.54	224.14	N	
GALLATIN	WB4ZSA	222.38	223.98	N	
GRAY/HOLSTON MTN	WD4SBX	223.30	224.90	*	
GREENBRIAR	WQ4E	223.20	224.80	N	AB
GREENBRIER	WQ4E	223.16	224.76	N	PR
GREENEVILLE	WB4NKM	223.34	224.94	*	ABR
HERMITAGE	WB4RAB	222.30	223.90	N	
JC/BUFFALO MT	WA4UCI	223.18	224.78	*	
JONESBOROUGH	WD4OBW	222.92	224.52	*	ALB
KNOXVILLE	W4BBB	222.90	224.50	*	
KNOXVILLE	KD4IBW	223.10	224.70	N	
KNOXVILLE	N4KFI	222.98	224.58	N	B
KNOXVILLE	N4OQJ	222.78	224.38	*	B
KNOXVILLE	WA4YON	222.86	224.46	N	
KNXVL/CROSS MT	KB4FZK	222.62	224.22	*	BT100
LAFOLLETTE	KA4OAK	222.68	224.28	N	
LAVERGNE	KJ4RA	223.36	224.96	N	
MEM/FISHERVILLE	N4DRL	222.90	224.50	N	AL
MEMPHIS	WA4KOG	223.18	224.78	N	
MEMPHIS	W4ZJM	222.34	223.94	*	BLT*#
MEMPHIS	W4BS	222.82	224.42	*	L
MORRISTOWN	N4RBB	222.80	224.40	N	AB
NASHVILLE	WR3S	222.56	224.16	N	ABRL
NASHVILLE	KI4OG	222.84	224.44	N	AERT
NASHVILLE	WR3S	223.06	224.66	N	ALR
NASHVILLE	KB4ZOE	222.76	224.36	*	AR
NASHVILLE	WB4NTM	222.48	224.08	*	
NASHVILLE	K4ZGA	222.88	224.48	*	
NASHVILLE	WA4PCD	223.34	224.94	N	T
NASHVILLE	N4PYI	223.14	224.74	*	ALRT100.0
SEVIERVILLE	N2FUV	222.84	224.44	N	PT
SHORT MTN	KE4NP	222.66	224.26	N	LR
SPRINGFIELD	KO4BN	222.62	224.22	N	ABER

440 MHZ

ALAMO	WB4EDS	448.75	443.75	N	L
BARTLETT	WA4PAJ	449.25	444.25	N	
BARTLETT	WA4DOR	448.70	443.70	N	T
BENTON/BEAN MT	K4SIR	449.95	444.95	N	T
BETHPAGE	KC4YCR	447.20	442.20	N	
BLUFF CITY	WB4RAV	449.725	444.725	N	BCO
BRISTOL/HLST MT	K4LSP	449.50	444.50	N	A
BROWNSVILLE	KB4YTU	449.20	444.20	N	PL
BROWNSVILLE	KB4YTU	449.45	444.45	N	CPL
CARTHAGE	N4OTT	448.725	443.725	*	
CHATTANOOGA	WJ9J	447.15	442.15	N	ABELR
CHATTANOOGA	N4JSR	447.325	442.325	N	
CHATTANOOGA	W4AM	449.10	444.10	*	A
CHATTANOOGA	WB4LRD	449.875	444.875	N	
CLARKSVILLE	KF4GP	449.95	444.95	N	
CLARKSVILLE	WA4BZU	449.325	444.325		T
CLEVELAND	WD4DES	447.25	442.25	*	
CLEVELAND	KD4NEB	447.45	442.45	N	AB
CLEVELAND	W4GZX	449.275	444.275	*	C AB
COLUMBIA	WA4BGK	449.925	444.925		T
COOKEVILLE	NQ4Y	449.55	444.55	N	
COOKEVILLE	N4UBR	447.30	442.30	N	B
CUMBERLAND CITY	WD4DBJ	448.40	443.40	*	PT
DOVER	N4VIH	449.925	444.925	N	
FAYETTEVILLE	KC4GPM	448.10	443.10	*	O
FISHERVILLE	N4DRL	449.30	444.30	N	ABEL
FRANKLIN	WA4AKM	449.725	444.725	*	LT
FRANKLIN	N4ULM	448.85	443.85	N	
GALLATIN	WD4KWP	449.45	444.45	N	
GALLATIN	WD4BKY	449.00	444.00	*	CBLPT107.2
GALLATIN	WA4AKM	449.775	444.775	*	NT107.2
GALLATIN	N4SSB	447.60	442.60	*	BLT107.2
GALLATIN	WD4BKY	449.35	444.35	*	LPT114.8
GATLBG/COVE MT.	WA4KJH	448.30	443.30	*	L
GORDONSVILLE	N4SSB	447.70	442.70	*	BLO
GRAY/HOLSTON MT	WD4SBX	447.20	442.20	*	T103.5
GREENBRIER	WQ4E	449.25	444.25	N	
GREENEVILLE	WB4NKM	449.65	444.65	*	T100.0
GRNVLE/VIKING MT	KB4UG	448.20	443.20	N	C
HENDERSON	K4TC	449.75	444.75	*	P
HENDERSONVILLE	N4SSB	447.50	442.50	*	BLT107.2
JACKSON	WB4EPG	447.80	442.80	N	A
JACKSON	WB7BOX	449.875	444.875	N	PERLT
JAMESTOWN	KC4MJN	448.625	443.625	N	
JASPER	KD4XV	447.05	442.05	*	O
JOHNSON CITY/HMV	WB4SQC	448.425	443.425	*	
KNOXVILL/ENG MTN	WB4HAP	449.60	444.60	*	
KNOXVILLE	KD4IBW	448.675	443.675	N	
KNOXVILLE	KB4KSL	449.50	444.50	*	AO
KNOXVILLE	KC4NNN	449.175	444.175	N	A
KNOXVILLE	WA4NTZ	447.50	442.50	N	
KNOXVILLE	WB4GBI	449.30	444.30	*	
KNXVL/CROSS MTN	N4UAG	448.075	443.075	N	BT
LAFAYETTE	KC4ECD	449.125	444.125	*	RT
LAWRENCEBURG	AB4UP	447.675	442.675	*	
LEBANON	WA4AXH	449.275	444.275		T
LONE MOUNTAIN	WJ9J	447.075	442.075	N	ELP
MARYVILLE	KC4PDQ	449.075	444.075	*	A
#MCMINNVILLE/HF.	WD4MWQ	449.65	444.65	N	UNCOORD.
MCNAIRY	NU5O	449.55	444.55	*	CLOSED
MEDINA	WA4BJY	447.05	442.05	N	AL
MEMPHIS	WA4KOG	449.40	444.40	N	
MEMPHIS	KA4JXT	449.10	444.10	N	RP
MEMPHIS	K0JXI	449.80	444.80	N	
MEMPHIS	KA0BRN	448.975	443.975	N	ALT
MEMPHIS	KA4JXT	448.10	443.10	N	T107.2
MEMPHIS	N4ERU	439.25	421.25	N	ATV
MEMPHIS	WA4ETE	449.00	444.00	*	T
MEMPHIS	WA4KOG	448.80	443.00	N	NB
MEMPHIS	WB4NNE	449.95	444.95	N	O
MEMPHIS	W4BS	448.20	443.20	*	
MEMPHIS	KA5RYF	448.95	443.95	N	
MEMPHIS	WF4G	447.825	442.825	N	
MEMPHIS	W4ZJM	448.00	443.00	*	BT*#
MEMPHIS	K4RDK	449.025	444.025	N	
MEMPHIS	WB4EPG	447.625	442.625	N	
MEMPHIS	K0JXI	449.60	444.60	N	
MEMPHIS	W4EM	421.25	434.00	*	V
MEMPHIS	WA4QWW	448.40	443.40	N	A
MEMPHIS/ADAMS M	KK5FC	449.825	444.825	*	
MILAN	WD4ABJ	447.10	442.10	N	
MONTEAGLE	N4SSB	447.40	442.40	*	LT0
MORRISTOWN	KD4LP	449.975	444.975	*	CLOSED
MORRISTOWN	KA4NEX	449.20	444.20	N	
MORRISTOWN	KD4LP	449.80	444.80	*	AB
MT JULIET	WB4PUB	448.05	443.05	N	P
MULLOY	KD4BNW	447.90	442.90	N	BT
NASHVILLE	WB4NTM	449.15	444.15	*	ATL
NASHVILLE	WA4PCD	449.675	444.675	N	
NASHVILLE	WA4AKM	449.875	444.875	*	T107.2
NASHVILLE	WA4BGK	449.825	444.825	N	T
NASHVILLE	KI4OG	449.05	444.05	N	ALTR
NASHVILLE	KJ4ZQ	439.25	421.25	N	V
NASHVILLE	N4TK	449.625	444.625	*	PT107.2
NASHVILLE	WA4AKM	449.975	444.975	*	LRPT107.2
NASHVILLE	WA4BZU	449.3	444.30		T
NASHVILLE	WA4WCK	449.575	444.575	*	T
NASHVILLE	N4ARK	449.225	444.225	*	BLPT107.2
OAK RIDGE	K4EAJ	449.40	444.40	*	L
OAKFIELD	WA4BJY	447.20	442.20	N	PTL
PARIS/GROVE HL	WA4WKS	448.50	443.50	N	
PIGEON FORGE	KD4CLA	449.925	444.925	*	P
PULASKI	KB4TPI	439.250	421.250	N	V
PULASKI	KB4TPI	447.150	442.150	N	
RAMER	WB4MMI	449.90	444.90	N	
ROCKWOOD	KA4WJS	448.975	443.975	N	
SEVIERVILLE	KD4CWB	449.00	444.00	N	
SEYMOUR	KD4CWB	448.80	443.80	N	
SHELBYVILLE	KC4KRM	448.825	443.825	*	
SHORT MTN	N4OYS	449.65	444.65	N	
SMITHVILLE	N4PYI	449.525	444.525	*	CT107.2
SMRYNA	KJ4RA	448.975	443.975	N	
SODDY DAISY	WJ9J	449.45	444.45	N	BELRP
WATERTOWN	N4IDG	449.90	444.90	*	P

920 MHZ

MORRISTOWN	KD4LP	908.80	920.80	*	BP
NASHVILLE	K4ZGA	910.25	923.25	*	LV

1270 MHZ

MEMPHIS	N4MW	1272.00	1292.00	*	B
NASHVILLE	KD4EEW	1277.25	439.25	N	VL
NASHVILLE	W4WXJ	1272.40	1284.40	N	
NASHVILLE	KB4ZOE	1274.50	1286.50	*	AL

BEACONS

GREENEVILLE	WB4NKM	222.058	BEACON	*	BEACON
MEMPHIS	N4MW	50.07	BEACON	*	
MEMPHIS	N4MW	28.25	BEACON	*	
MEMPHIS	N4MW	1296.28	BEACON	*	C
MEMPHIS	N4MW	144.28	BEACON	*	
MEMPHIS	N4MW	432.395	BEACON	*	
MEMPHIS	N4MW	456.04	BEACON	*	
MEMPHIS	N4MW	222.055	BEACON	*	
MEMPHIS	N4ZRW	144.297	BEACON	*	
MEMPHIS	N4MW	902.28	BEACON	*	
MEMPHIS	N4MW	304.215	BEACON	*	

VIRGINIA REPEATERS

(Listing updates for some repeaters courtesy of T-MARC)

10 METERS

NEWPORT NEWS	WB4CTF	29.60	29.60	*	R
ONEIDA PK/BLFLD	WZ8E	29.58	29.68	N	RL
ROANOKE/POOR MT	WB8BON	29.54	29.64	*	CL
STERLING	KD4DN	29.58	29.68	M	MT

6 METERS

ALEXANDRIA	WA4CCF	52.13	53.13	M	ML
AMELIA COURTHSE	KB4YKV	52.11	53.11	N	P
ARLINGTON	KI4MB	52.05	224.06	M	MCL
BEDFORD/THAX MT.	WB4DBB	52.15	53.15	*	
CENTERVILLE	KA4DCS	52.58	52.48	M	M
DANVILLE(DCC)	AA4QT	52.13	53.13	*	
FANCY GAP	WD4ICX	52.29	53.29	*	T107.2
GATE CITY	N4WWB	52.21	53.21	N	ABL
GUM SPRINGS	KB4MIC	52.07	53.07	*	
HERNDON	WD4KHP	52.62	52.82	M	TM
LEXNGTN/ROCK MT.	KI4ZR	52.01	53.01	*	L
RICHMOND	WB4FAX	52.43	53.43	N	
ROANOKE	WB4DBB	52.25	53.25	*	L
ROANOKE/POOR MT	WB8BON	52.09	53.09	*	CL

2 METERS

ABINGDN/BRMLY MT	K4LSP	146.01	146.61	N	L
ABINGDON	NM4L	147.945	147.345	*	ABL
ACCOMAC	WA4TVS	147.855	147.255	*	EB
ALEXANDRIA	W4HFH	147.915	147.315	M	ML
ALEXANDRIA	WB4MJF	144.55	145.15	M	M
ALEXANDRIA	WD4PDP	146.055	146.655	M	MP
ALTAVISTA	WA4ISI	146.055	146.655	*	BELP
ALTON	WD4LBM	146.46	147.06	*	P
AMELIA COURTHSE	KB4YKV	147.78	147.18	N	P
ARLINGTON	N4EFJ	144.87	145.47	M	M
BARREN SPRINGS	K4HZS	146.07	146.67	N	
BEAVERDAM	N4CZJ	144.65	145.25	N	BP
BEDFD-APL ORCH	WA1ZMS	144.81	145.41	*	BT100.0
BEDFD/APL ORCH	WB4DBB	144.63	145.23	*	
BEDFORD	WB4JBJ	147.705	147.105	*	PL
BLACKSBURG	AB9I	146.115	146.715	N	
BLAND	N4AZJ	144.75	145.35	*	RP
BLUEFIELD	W8MOP	144.89	145.49	*	P
BLUEMONT	WA4TSC	147.90	147.30	M	M
BRISTOL	WD4CYZ	146.28	146.88	N	
CHARLOTTESVILLE	N4RAG	146.295	146.895	*	B
CHARLOTTESVILLE	KC4YLX	144.69	145.29	N	
CHARLOTTESVILLE	WA4TFZ	146.325	146.925	*	
CHARLOTTESVILLE	WA4TFZ	146.16	146.76	*	
CHASE CITY	W4AXH	146.31	146.91	*	
CHESAPEAKE	KL7SR	147.705	147.105	N	C
CHESAPEAKE	N4GSP	146.01	146.61	*	ABE
CHESAPEAKE	N4SD	146.19	146.79	*	AE
CHESAPEAKE	K4NDH	144.69	145.29	N	E
CHESTERFIELD	KA4CBB	147.96	147.36	*	BEP
CLARKSVILLE	N4ZCM	144.87	145.47	*	CP
COLLINSVILLE	KN4DE	147.72	147.12	N	BLT103.5

MORE VIRGINIA REPEATERS

COVINGTON	WA4HTI	146.205	146.805	*	L
CULPEPER	AA4VI	147.72	147.12	M	M
DANTE	WD4CYZ	147.855	147.255	N	
DANVILLE(DCC)	AA4QT	146.325	146.925	*	AET103.5
DANVILLE/WHT OAK	KM4AU	146.10	146.70	*	BERP
ELK CRK/IRON MTN	N4MGQ	146.10	146.70	N	LT107.2
ENON	WA4ECM	147.66	147.06	*	BP
FAIRFAX	W4LBL	146.19	146.79	M	MP
FALLS CHURCH	W4AQD	144.75	145.35	M	MT
FARMVILLE	WA4QQI	144.73	145.33	*	
FINCASTLE	W4WIC	146.04	146.64	*	A
FOREST	KA7UKJ	144.77	145.37	*	L
#FRANKLIN	K4SPS	147.90	147.30	*	UNCOORD.
FREDRICKSBURG	WB4LNT	147.615	147.015	M	M
GALAX/BRIRP MT	N4VL	147.69	147.09	*	A
GALAX/LKOUT MT	N4VL	144.53	145.13	*	R
GATE CITY	N4WWB	146.22	146.82	N	
GLADYS	N4UTN	147.945	147.345	*	BLT
GLOUCESTER	KC4TOG	144.77	145.37	*	PE
GREENBAY	K4ARO	144.55	145.15	N	
GRUNDY	K4HWQ	147.915	147.315	N	A
GRUNDY/BIG A MT.	WD4DCX	146.235	146.835	N	L
GUM SPRING	WB4IKL	147.87	147.27	*	
HAMPTON	K4UMI	146.34	146.94	N	T
HAMPTON	KA4VXR	147.825	147.225	N	A
HAMPTON	K4DHO	146.13	146.73	*	PE
HARRISONBURG	N4YET	144.53	145.13	M	M
HARRISONBURG	N4RAG	147.825	147.225	*	AMT-131.8
HARRISONBURG	N4YET	147.915	147.315	M	MA
HERNDON	N4FXP	144.71	145.31	M	MP
JEWELL RIDGE	WB4QJZ	147.75	147.15	N	
KILMARNOCK	W2MS	144.61	145.21	*	A
LEXINGTON	KI4ZR	147.90	147.30	*	AB
LEXNGTN/ROCK MT.	KI4ZR	147.93	147.33	*	
LORTON	KE4ZN	144.57	145.17	M	MT
LORTON	N4JOQ	144.57	145.17	M	MC
LUNENBURG CT.HSE	AA4OG	147.84	147.24	*	
LYNCHBURG	W4WWQ	146.01	146.61	*	
LYNCHBURG	AB4M	146.415	147.015	N	P
LYNCHBURG	WA4RTS	147.795	147.195	*	
LYNCHBURG	KB4ILD	147.975	147.375	N	P
MADISON	N4AJO	147.99	147.39	M	M
MANASSAS	WA4FPM	146.37	146.97	M	MBLPE
MARION	N4QLF	146.04	146.64	N	A
MARION	KC4SKE	144.67	145.27	N	T103.5
MCLEAN	WD4IWG	147.81	147.21	M	MBP
MOUNTAIN LAKE	WZ8E	147.465	146.865	N	PL
MT.LAKE/BALD KNB	K4TUE	146.31	146.91	*	P
NEW MARKET	K4AVW	146.025	146.625	M	MB
NEWPORT NEWS	WA4OHX	144.89	145.49	*	ABET''6''
NEWPORT NEWS	WB4CTF	147.765	147.165	*	PLR
NEWPORT NEWS	W4MT	144.63	145.23	*	B
NORFOLK	NE4D	146.10	146.70	N	E
NORFOLK	WA4ZUA	144.57	145.17	N	PER
NORFOLK	KA4HBU	147.675	147.075	N	
NORFOLK	NS3F	144.73	145.33	*	
NORTON/HIGH KNOB	K4AXO	146.415	147.015	N	LP
OILVILLE	N4TZE	147.69	147.09	N	C
ONEIDA PEAK/BLF	WZ8E	146.355	146.955	*	PL
PEARISBURG	N4AZJ	147.735	147.135	N	
PENNINGTON GAP.	N4LQC	146.10	146.70	N	
PETERSBURG	K4ARO	147.99	147.39	N	
PKS KB/PULASKI	KT4Z	147.78	147.18	*	P
PORTSMOUTH	W4POX	146.25	146.85	*	AE
RICHMOND	WA4ZBE	146.28	146.88	*	P
RICHMOND	N4HB	147.735	147.135	*	T
RICHMOND	K4YPE	144.51	145.11	*	A
RICHMOND	W4SQT	144.83	145.43	N	P
RICHMOND	WB4QEY	146.04	146.64	*	P
RICHMOND	WA4JST	146.43	147.03	N	
RICHMOND	W4ZA	146.34	146.94	*	
RICHMOND	WB4FAX	144.59	145.19	N	
#RIDGEWAY	AA4QT	147.885	147.285	*	UNCOORD.
ROANOKE	N4AP	146.34	146.94	N	A
ROANOKE/POOR MT	W4CA	146.385	146.985	*	BEP
ROANOKE/POOR MT	KC4DY	146.145	146.745	*	BEP
ROANOKE/POOR MT.	WB4QOJ	144.61	145.21	N	YVKL
ROANOKE/POOR MTN	KB4QWO	147.87	147.27	N	BCLP
ROANOKE/POOR MTN	K4ARO	144.79	145.39	N	LC
RUSTBURG/LONG MT	N4UTN	146.235	146.835	*	BP
SALEM	W4PDL	146.28	146.88	N	
SALUDA	AA4HQ	144.85	145.45	*	ABE
SMITHFIELD	N3ELM	147.795	147.195	*	BLPT100.0
STAFFORD	NM7J	144.67	145.27	M	MP
STAUNTON	W4XD	146.10	146.70	*	
STAUNTON	WA4ZBP	146.25	146.85	*	RY
STAUNTON	W4WRN	146.37	146.97	N	E
STAUNTON/EL. KB	WD4FOZ	147.645	147.045	*	T131.8
STERLING	WA4TXE	146.115	146.715	M	MBP
STUARTS DRAFT	KB4OLM	147.96	147.36	*	PELP
SUFFOLK	WA4HMT	146.40	147.00	*	PE
TROY	KC4YLX	144.69	145.29	*	BEP
TYSONS CORNER	W4XG	146.31	146.91	M	MP
VIENNA	K4HTA	146.085	146.685	M	MB
VIRGINIA BEACH	WA4KXV	146.37	146.97	*	E
VIRGINIA BEACH	WA4KXV	146.295	146.895	*	
VIRGINIA BEACH	W4NV	147.975	147.375	*	BP
VIRGINIA BEACH	WA4SBC	147.645	147.045	N	
WARRENTON	NZ4N	147.765	147.165	M	M
WARSAW	KA4ZIP	147.93	147.33	*	E
WAYNESBORO	W4PNT	147.675	147.075	*	BELP
WILLIAMSBURG	KB4ZIN	146.16	146.76	*	ABE
WILLIAMSBURG	W4NTG	146.07	146.67	*	ABE
WILLIAMSBURG	K2QIJ	144.81	145.41	*	BPT127.3
WINCHESTER	N4RAG	144.61	145.21	*	MT131.8
WINCHESTER	W4RKC	146.22	146.82	*	ME
WOODBRIDGE	WB4FQR	147.84	147.24	M	MA
WYTHEVILLE	WB3T	146.175	146.775	*	AEL
WYTHEVL/SAND MTN	WB3T	147.84	147.24	*	ABELT103.5
YORKTOWN	WA4ZBF	147.945	147.345	N	

220 MHZ

ALEXANDRIA	WA4CCF	223.22	224.82	M	ML
ARLINGTON	KI4MB	222.46	224.06	M	M
BEDFD/APL ORCH	WB4DBB	224.26	222.66	*	RL
BEDFORD	N4PLV	223.24	224.84	N	B
BLF/ONEIDA PK	KD4ARY	222.96	224.56	*	
BLFD/E.RIVER MTN	N8LGA	223.32	224.92	*	C B
CHARLOTTESVILLE	WA4TFZ	223.16	224.76	*	
CHARLOTTESVILLE	KB4YQC	222.54	224.14	*	BCPT
COLLINSVILLE	KN4DE	222.82	224.42	N	
DANVILLE	AA4QT	222.78	224.38	*	
DANVLE/WHITE OAK	N4GLA	222.84	224.44	N	AE
DELTAVILLE	AA4HQ	223.30	224.90	N	AE
FAIRFAX	WB4YHD	222.50	224.10	M	ML
FALLS CHURCH	N4CHP	223.38	224.98	M	MP
GLOUCESTER PT.	N4THN	223.02	224.62	*	BEP
HAMPDEN-SYDNEY	WB4PEA	222.60	224.20	N	O
HAMPTON	WB4PVT	223.26	224.86	N	OABER
LAKE GASTON	WA4HMT	223.00	224.60	*	C
LEESBURG	WA4TXE	222.42	224.02	M	M
LOVETTSVILLE	WB4FUJ	222.86	224.46	M	MC
LYNCHBURG	AB4M	222.68	224.28	N	P
MANASSAS	KB4CVL	222.74	224.34	M	M
MANASSAS	WA4FPM	223.06	224.66	M	MBLPE
MARTINSVILLE	WB4BVI	222.90	224.50	*	P
NORTON/HIGH KNOB	WD4GSM	222.82	224.42	N	B
PETERSBURG	K4ARO	223.10	224.70	N	
RICHMOND	WA4ONG	222.92	224.52	N	K
ROANOKE	WB4DBB	222.50	224.10	*	L
ROANOKE/CHAUS MT	AB4EM	223.34	224.94	*	
SINGERS GLEN	K4SAD	223.22	224.82	M	MC
STAUNTON	N4RAG	223.14	224.74	*	
STERLING	WD4KHP	222.12	223.72	M	M
TYSONS CORNER	WD4KHP	223.12	224.72	M	M
TYSONS CORNER	WD4KHP	222.82	224.42	M	MT
VIENNA	K4HTA	222.34	223.94	M	M
VIRGINIA BEACH	N4WQJ	223.14	224.74	*	
WOODBRIDGE	WB4GJZ	223.18	224.78	M	M

440 MHZ

ALEXANDRIA	WA9GVK	426.25	911.25	M	MVL
ALEXANDRIA	W4HFH	449.60	444.60	M	M
ALEXANDRIA	WA9GVK	426.25	439.25	M	MV
ALTAVISTA	WA4ISI	449.425	444.425	*	BELP
ARLINGTON	KI4MB	449.15	444.15	M	M
ARLINGTON	KA4DCS	444.875	449.875	M	M
BEDFD/APL ORCH	WB4DBB	449.35	444.35	*	L
BIG ''A'' MTN	KB4WTP	449.875	444.875	*	
BLUEFIELD	W8MOP	449.45	444.45	*	ER
BLUEFIELD	WZ8E	449.625	444.625	N	PL
BLUEMONT	WA4TSC	444.925	449.925	M	M
CHANTILLY	K4HTA	443.375	448.375	M	MC
CHARLOTTESVILLE	WA4TFZ	449.25	444.25	*	
CHESAPEAKE	K4NDH	448.80	443.80	N	P
CHESAPEAKE	N4EVG	448.90	443.90	N	PE
COLLINSVILLE	KN4DE	449.575	444.575	N	T103.5
COVINGTON	WA4HTI	447.25	442.25	*	O
DANVILLE	KD4OMC	449.40	444.40	*	B
ENON	WA4ECM	449.20	444.20	*	R
FAIRFAX	WD4KHP	444.775	449.775	M	MCL
FALLS CHURCH	K8ZOA	449.45	444.45	M	ML
FALLS CHURCH	N4EFK	449.30	444.30	M	M
FANCY GAP	KC4TOU	449.90	444.90	N	
FANCY GAP	N4OWU	449.375	444.375	*	T107.2
FOREST	WD4KQI	449.75	444.75	*	A
FOREST	W8CXD	448.60	443.60	*	O
GASBURG	WA4HMT	447.00	442.00	*	C
GATE CITY	N4WWB	449.70	444.70	N	L
GREAT FALLS	N3AVA	449.05	444.05	M	M
GREENBAY	K4ARO	448.175	443.175	N	
GUM SPRING	KB4MIC	447.80	442.80	*	
HAMPTON	K4OGT	449.55	444.55	*	EPT167.9
HAMPTON	K4UMI	448.65	443.65	N	
INDEPENDNCE HILL.	AA4VA	448.80	443.80	M	M
LEXNGTN/ROCK MT.	KI4ZR	449.15	444.15	*	
LORTON	WD4KHP	444.725	449.725	M	ML
LYNCHBG/JACK MT.	KF4YI	447.40	442.40	N	P
LYNCHBURG	AB4FU	447.95	442.95	*	PT
LYNCHBURG	K4HEX	426.25	923.25	*	V
LYNCHBURG/TOBRMT	K4HEX	449.50	444.50	*	R
MADISON	N8HON	449.40	444.40	M	MBL
MANASSAS	WD4JCE	444.225	449.225	M	ML
MT. VERNON	WA5ZAI	449.50	444.50	M	M
NORFOLK	WD4MIZ	449.675	444.675	N	
NORTON/HIGH KNOB	WA4NDQ	449.85	444.85	*	BLRT
OILVILLE	KB4MIC	449.80	444.80	*	P
#ONEIDA PEAK/BLF	WZ8E	448.625	443.625	N	UNCOORD.
PEARISBURG	N4AZJ	449.975	444.975	*	T103.5
PETERSBURG	K4ARO	449.40	444.40	N	T
PETERSBURG	WB4KZI	448.825	443.825	*	
PORTSMOUTH	KK4SN	449.00	444.00	*	AE
POWHATAN	KD4ADW	448.10	443.10	N	P
RICHMOND	KC4VDZ	447.30	442.30	N	
RICHMOND	K4ARO	449.85	444.85	N	
RICHMOND	N4LFU	448.35	443.35	*	
RICHMOND-ASHLAND	K4ARO	449.65	444.65	N	
ROANOKE	KA4YUY	447.175	442.175	*	
#ROANOKE AIRPORT	KD4EG	448.75	443.75	N	UNCOORD.
ROANOKE/POOR MT	W4CA	447.50	442.50	*	BEP
ROANOKE/POOR MT.	N4VG	447.70	442.70	*	
ROANOKE/POOR MT.	N4FHL	426.25	439.25	N	V
ROANOKE/POOR MT.	WB8BON	448.65	443.65	*	C
ROANOKE/TINKER M	WB8BON	449.925	444.925	*	B
SINGERS GLEN	K4SAD	449.60	444.60	M	MC
SMITHFIELD	N3ELM	448.55	443.55	*	BLPT100.0
SOUTH BOSTON	AB4YR	448.925	443.925	*	
SPRINGFIELD	WD4KHP	444.825	449.825	M	MT
STAFFORD	KB4OB	448.85	443.85	N	MBP
STAUNTON	W4WRN	449.95	444.95	N	
STAUNTON	WA4ZBP	449.825	444.825	*	
STAUNTON/EL KNOB	WD4FOZ	449.10	444.10	*	T131.8
STERLING	WA4TXE	447.10	442.10	M	MLP
STERLING	WA4TXE	447.20	442.20	M	M
STUART/SPOON MTN	WA4WTB	449.175	444.175	*	RT107.2
STUARTS DRAFT	KB4OLM	449.05	444.05	*	BELP
THE PENTAGON	K4AF	449.55	444.55	N	MT
TYSONS CORNER	KM4FI	448.50	443.50	M	M
TYSONS CORNER	K4JYF	449.75	444.75	M	M
VIENNA	N4KOU	449.85	444.85	N	M
VIRGINIA BEACH	WA4KXV	449.95	444.95	*	E
WAYNESBORO	WA4EZA	449.20	444.20	*	BT141.3
WAYNESBORO	KA5NOJ	439.25	426.25	*	V
WHITETOP MTN	KM4X	448.00	443.00	*	BT103.5
WILLIAMSBURG	W4NTG	448.95	443.95	*	O
WILLIAMSBURG	WB5LFS	449.10	444.10	*	BT
WILLIS	W4DUM	448.875	443.875	N	BT
WINCHESTER	NB3O	444.175	449.175	M	M
WINCHESTER	W3CSG	447.00	442.00	M	M
WOODBRIDGE	N4LJZ	448.10	443.10	N	M
WOODBRIDGE	KA4DCS	444.875	449.875	M	M
WOODBRIDGE	WB4FQR	449.90	444.90	M	M
WOODFORD	WA4SDE	443.975	448.975	M	M
WYTHEVILLE	WB3T	447.00	442.00	*	ABLRT103.
WYTHEVILLE/SAND	WB3T	449.325	444.325	*	

920 MHZ

ALEXANDRIA	WA4CCF	907.60	919.60	M	M
FOREST	KB4OSI	909.00	921.00	*	
LYNCHBURG	WA1ZMS	909.10	921.10	*	
ROANOKE	KM4TT	908.90	920.90	*	P

1270 MHZ

ALEXANDRIA	WA4CCF	1270.60	1282.60	M	M
MCLEAN	K6LEW	1272.10	1292.10	N	M
ROANOKE/POOR MTN	WB4DBB	1271.02	1291.02	*	
TYSONS CORNER	WR4S	1272.00	1292.00	M	MB

WEST VIRGINIA REPEATERS

(Listing updates for some repeaters courtesy of T-MARC)

10 METERS

BECKLEY/BOLT	KA8OTX	29.52	29.62	*	
BERKELEY SPRINGS	KK3L	29.52	29.62	M	ML
#CHARLESTON	WB8CQV	29.54	29.64	N	UNCOOR

6 METERS

BOLT/BOLT MT	N8DKL	52.05	53.05	N	
MARMET/CHARLESTO	N8PEI	52.75	53.75	N	B
#ST ALBAN/COAL M	WD8JKA	52.03	53.63	N	UNCOOR

2 METERS

AMBER RIDGE	KB8NJH	147.81	147.21	N	B
BARBOURSVILLE	KB8EHJ	146.46	441.00	*	L

MORE WEST VIRGINIA REPEATERS

BECKLEY/BOLT	N8FRV	144.57	145.17	*	AL
BECKLEY/EOC	KD8VS	144.77	145.37	N	A
BECKLEY/FLAT TOP	WA8WDK	146.25	146.85	N	L
BECKLEY/LAYLAND	WF1G	144.71	145.31	*	AL
BERKELEY SPRINGS	KK3L	146.145	146.745	M	MB
BERKELEY SPRINGS	KK3L	144.990	29.620	M	ML
BLUEFIELD	W8MOP	144.89	145.49	N	P
BRIDGEPORT	WB8DKM	147.72	147.12	*	PT
BUCKHANNON	N8FHE	144.53	145.13	*	AL
BUCKHANNON	N8FHE	144.81	145.41	*	A
BUCKHANNON	WD8L	146.25	146.85	N	B
CHARLES TOWN	N8EIV	146.385	146.985	M	MT-NIGHT
CHARLESTON	WB8IFS	146.22	146.82	N	AE
CHARLESTON	WS8L	144.83	145.43	*	P
CLARKSBURG	N8FMD	146.085	146.685	*	L
CLARKSBURG	N8FMD	147.81	147.21	*	T103.5
CLARKSBURG	KD8TC	146.055	146.655	N	C
CRAIGSVILLE	N8FMD	144.67	145.27	*	L
ELKINS	KB8BWZ	146.175	146.775	N	
FAIRMONT	W8SP	144.75	145.35	N	C
FLAT TOP/WINTRPL	WF1G	146.025	146.625	*	A
FRANKLIN	W3RUA	147.945	147.345	*	B
GASSAWAY	WB8MZI	146.01	146.61	N	
GLENVILLE	KB8EUN	146.235	146.835	N	
GLENVILLE	KA8ZXP	144.69	145.29	N	ABELR
GRAFTON	WD8LNB	147.975	147.375	*	
GRANTSVILLE	N8LGY	144.85	145.45	*	PE
HARRISVL/PENSBRO	WB8NSL	147.90	147.30	N	
HINTON	KB8EQC	147.855	147.255	*	AB
HORSEPEN MT	NV8H	147.795	147.195	N	PL
HUNTINGTON	W8VA	146.16	146.76	*	PEL
HUNTINGTON	WB8FEQ	144.61	145.21	*	BP
HUNTINGTON/CHAS	WB8EZR	146.04	146.64	*	ER
LEON	WD8OHX	147.78	147.18	N	BP
LEWISBURG	WV8D	147.99	147.39	*	
LEWISBURG	WA8AVZ	146.13	146.73	*	P
LIBERTY	W8HYX	144.81	145.41	*	
#LOGAN	WA8ZLR	146.09	147.11	N	UNCOORD.
LOGAN/SUMERCO	NU8K	147.945	147.345	N	PL
LOGAN/WARD RK MT	KJ8E	146.37	146.97	N	PL
MARMET	K8HDB	144.55	145.15	N	
MARTINSBURG	WB8YZV	147.855	147.255	M	M
MARTINSBURG	WA8FSE	144.55	145.15	M	MB
MCMECHEN	N8FQN	146.31	146.91	*	
MORGANTOWN	KE8QC	147.675	147.075	*	AELRP
MORGANTOWN	W8CUL	146.16	146.76	*	BLP
MORGANTOWN	K8LG	144.83	145.43	N	AL
MULLENS/HRNDN MT	KC8IT	147.63	147.03	*	R
NEW MARTINSVILE	KF8LL	146.385	146.985	N	AB
OAK HILL	W8OQC	146.19	146.79	*	E
PARKERSBURG	WA8LLM	147.855	147.255	*	AB
PARKERSBURG	WV8G	144.89	145.49	*	AB
PARKERSBURG	WA8CRW	147.99	147.39	*	B
PARKERSBURG (OH)	WA8CRW	146.37	146.97	N	A (OHIO)
PARSONS	KE8QC	144.73	145.33	*	BELRPT
PARSONS	K8VNQ	144.77	145.37	N	T107.2
PRINCETON	KA8PNC	146.46	147.06	*	P
PRINCETON	WB8NRK	147.825	147.225	*	
PRINCETON/PIPEST	WD8OGY	146.325	146.925	N	A
RAVENSWOOD	WD8JNU	146.07	146.67	*	P
RAVENSWOOD	WD8JNU	146.10	146.70	*	R
RICHWOOD	W8FG	144.87	145.47	N	
RICHWOOD	WB8YJJ	144.59	145.19	*	BT
SALT ROCK	WD8MCR	144.51	145.11	N	
SCOTT DEPOT	WC8S	147.87	147.27	*	PEL
SHERRARD	KD8GL	146.115	146.715	*	EPL
SO. CHARLESTON	WB8CQV	146.28	146.88	N	L
SPENCER	WT8Z	147.705	147.105	N	
SPRUCE KNOB	N8HON	147.885	147.285	*	L
ST ALBANS	K8WMX	147.975	147.375	*	Y
ST ALBANS	K8WMX	146.40	147.00	*	B
ST ALBANS	KA8SVR	147.75	147.15	N	BELRP
ST MARYS/BENS R	WB8ECC	147.63	147.03	N	L
TERRA ALTA	KD8ZR	147.60	147.00	*	AE
UPPER TRACT	KB8BUC	146.055	146.655	*	B
WEIRTON	W8CWO	146.34	146.94	N	ABEP
WELCH	WB8SXZ	144.85	145.45	N	
WESTON	WC8K	147.765	147.165	N	BR
WESTON	WD8EOM	144.79	145.39	N	P
WHEELING	WB8JGY	144.59	145.19	N	PL
WHEELING	W8ZQ	146.16	146.76	*	B
WILLIAMSON	WR8M	144.73	145.33	*	AR

220 MHZ

CHARLESTON	WB8YST	222.76	224.36	*	BRPT
FLAT TOP/WINTRPL	WF1G	222.52	224.12	*	A
#LEON	WD8OHX	222.18	223.78	N	UNCOORD.
#WILLIAMSON	WR8M	222.54	224.14	*	UNCOORD.

440 MHZ

ALDERSON	WF1G	449.40	444.40	*	
AUDRA PARK	WD8DEP	449.90	444.40	N	
BECKLEY/BOLT	AA8BS	447.30	442.30	*	RB
BECKLEY/KINGSTON	WF1G	449.80	444.80	*	R
BLUEFIELD	W8MOP	449.45	444.45	*	ER
BUCKHANNON	N8FHE	448.10	443.10	*	L
BUCKHANNON	WV8Y	449.50	444.50	N	BR
CHARLESTON	KB4BNW	449.75	444.75	N	
CLARKSBURG	N8FMD	449.175	444.175	*	T103.5
GLENVILLE	KA8ZXP	449.325	444.325	N	
HUNTINGTON	WB8EZR	448.00	443.00	*	
#HUNTINGTON	W8VA	447.60	442.60	*	UNCOORD.
KEENY MTN	KF8FO	449.725	444.725	*	
MORGANTOWN	W8CUL	449.80	444.80	*	BLP
MORGANTOWN	K8LG	449.70	444.70	N	L
MULLENS/HRNDN MT	KC8IT	449.00	444.00	*	LR
PARKERSBURG	WV8G	449.775	444.775	*	BC
SO. CHARLESTON	WB8CQV	449.95	444.95	N	RL
ST. ALBANS	K8MHR	448.15	443.15	*	BELP
WESTON	WC8K	449.60	444.60	N	C
WESTON	N8FIP	448.975	443.975	N	BR

SERA Full Repeater Membership Application

Please fill out the Full Member Application. Maximum number of letters for your repeater Name is 14 characters. Be sure to list 2 persons as representatives. ONLY these two will be SERA reps and receive the Repeater Journal. MAIL YOUR CHECK AND APPLICATION TO: SERA MEMBERSHIP, P.O. BOX 215, TOBACCOVILLE, N.C. 27050

	CITY/MTN. ETC. (MAX 14 CHAR)	RPTR CALLSIGN	INPUT FREQ.	OUTPUT FREQ.
REP. #1				
REP. #2				
REP. #3				
REP. #4				

USE AS MANY LINES ABOVE AS YOU HAVE REPEATERS. IF MORE SPACE NEEDED, USE SEPARATE SHEET OF PAPER.

Name Two Persons Who Will Represent SERA as Full Members. Each Will Receive the Repeater Journal.

NAME____________________CALL__________	NAME____________________CALL__________
ADDRESS______________________________	ADDRESS______________________________
CITY______________STATE_____ZIP_______	CITY______________STATE_____ZIP_______
PHONE: ( )____________________	PHONE: ( )____________________
ARRL MEMBER: ( ) YES ( ) NO	ARRL MEMBER: ( ) YES ( ) NO

FULL MEMBERSHIP: ( ) NEW ( ) RENEWAL - FEE IS ENCLOSED- AMOUNT : $__________

$10.00 for Remainder of 1993.

REPEATER IS SPONSORED BY: (Name of Club or owner)______________________________

REPEATER TRUSTEE'S NAME: ______________________________CALL ______________

SERA IS THE OFFICIAL COORDINATOR FOR: NC, SC, VA, TN, KY, TN, GA, MS.

18th Annual Western Carolina Hamfest

(Formerly the Asheville Hamfest)

An ARRL Sanctioned Event

July 24th & 25th - 1993

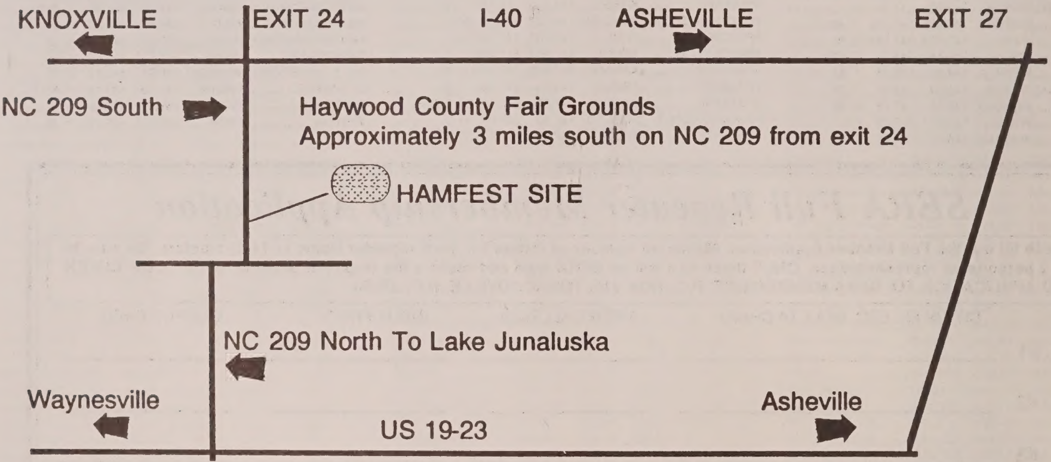
Haywood County Fair Grounds

(Near Waynesville & Lake Junaluska NC)

DEALER INFORMATION
Carl, N4AA, 704-683-4251

GENERAL INFORMATION
Jean, WB4KRZ, 704-252-9806

Make your plans early, this is Bele Chere Festival Weekend in downtown Asheville and Folkmoot Festival time in Haywood County, which means there will be lots of activities in the area - a perfect time to plan a mini-vacation to the mountains.


KNOXVILLE
EXIT 24
I-40
ASHEVILLE
EXIT 27
NC 209 South
Haywood County Fair Grounds
Approximately 3 miles south on NC 209 from exit 24
HAMFEST SITE
NC 209 North To Lake Junaluska
Waynesville
Asheville
US 19-23

Talk-In By W4MOE on 146.76 (Mt. Pisgah)

Grand Prize: Kenwood TS-450S / AT

Second prize: Kenwood TM-241A 2 meter mobile

Pre-registration Prize: TH-28A handheld - 2M

(Prizes furnished through DOC's Communications)

You Do Not Have To Be Present To Win The Above Prizes
PRE-REGISTRATION DRAWING 10:00 AM SATURDAY
MAIN PRIZE DRAWING AT 2:00 PM SUNDAY

FCC EXAMS Will Be Held At 1:00 PM Saturday - Walk-ins Welcome
HAYWOOD TECHNICAL COMMUNITY COLLEGE
$5.60 Fee, Checks Payable to WCARS VEC
Bring Original License plus a copy and any CSCE's and Positive ID
Contact Norman Harrill , N4NH, 7 Skylyn Court, Asheville NC 28806, 704-253-1192

NORTH CAROLINA NEWS

-by Gene Fegely, K3EJG

Send News To: 115 Randomwood Lane, New Bern, NC 28562

The New Year means new officers for many organizations: **High Point ARC** elected Barry Garner, N4UOH, as president. Vice president John Mixon, KB4NHI; Secretary Barbara Mixon, KB4NGP; and Treasurer Mark McMahan, KB4MFP, complete the new officers.

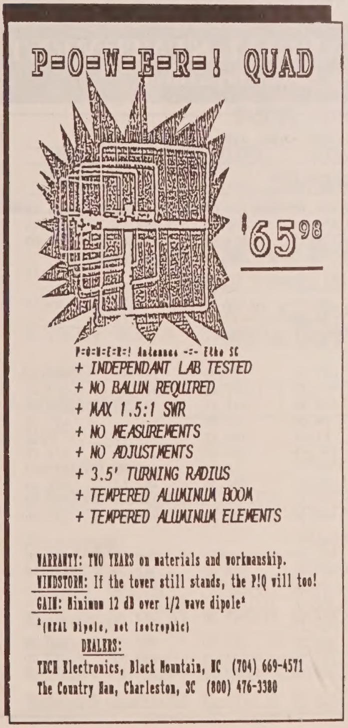
The club plans several interesting events for the year, including a marathon in May, an August ice cream social, and a soccer tournament in September. Now that's quite a variety from the normal antenna lectures, and Field Day planning sessions held by other clubs!

Of course, they do have an annual Ham Fest, and participate in Field Day, too. Actually, the March meeting featured a program on packet radio by Charles Layno, WB4WOR. The group meets every first Monday at the Steer Inn, Fairfield Road in High Point.

Triangle East Officers

Ballot results from the Triangle East ARA arrived right after deadline last issue, and as predicted, Dave Hockaday, WB4IUY, was elected prsident. (It only took one vote, I suppose?) Other officers are: VP Glen Speight, KD4BSP; Secretary Gladys Tallant, KD4PMA; William Sellers, KC4SDK; and Sarah Patterson, KD4SZF, the Feedline Editor.

Sarah penned a fine tribute to her dad in her first editorial, but failed to mention his call, although it did remind me of bringing up my own children, two of three getting their licenses eventually-- Barb, N4TLE, in Nashville, and Hugh, N3GJG, serving aboard the USS Nebraska.



P=O=W=E=R=! QUAD

'65^98

P=O=W=E=R=! Antennas -=- Elko SC

+ INDEPENDANT LAB TESTED
+ NO BALUN REQUIRED
+ MAX 1.5:1 SWR
+ NO MEASUREMENTS
+ NO ADJUSTMENTS
+ 3.5' TURNING RADIUS
+ TEMPERED ALUMINUM BOOM
+ TEMPERED ALUMINUM ELEMENTS

WARRANTY: TWO YEARS on materials and workmanship.
WINDSTORM: If the tower still stands, the P!Q will too!
GAIN: Minimum 12 dB over 1/2 wave dipole*
*(REAL Dipole, not Isotrophic)

DEALERS:
TECH Electronics, Black Mountain, NC (704) 669-4571
The Country Ham, Charleston, SC (800) 476-3380

Jim Davis, KK4MM and Lloyd Davis, K4EHZ, enjoy the food at the Kinston Hamfest in March. The full trash cans show that many others must have done the same. (foto by Gene Fegely)

Another item from that publication was a Note of Thanks from a couple who had lost their home to a tornado last november. The group managed a $200 donation at their December meeting to help the Corbett family in Wilson's Mills. A special antenna report on a two meter J-pole by Dave Pickrell, KQ4FL, finished an excellent first edition.

Triangle East also announces the operation of a special events station, AC4QD, on June 19th to celebrate the National Hollerin' Contest at Spivey's Corner. Operating hours are 0300Z to 1200Z on 7.135, 21.405, 28.335, and 14.260mhz. For certificate, send QSL and SASE to TEARA, 209 N. Third Street, Smithfield, NC 27577.

Cape Fear ARS

Sid Purvis, WA4VBC, kindly passed on several copies of the impressive Cape Fear News from Fayetteville. This newsletter, edited by Hutch Hutchinson, NK0S, and featuring a fine advertising section supervised by Mike Prevatte, KN4XP, contains complete coverage of the club's activities, amusing "hamette" hints from Cindy Rogers, KD4EVS, and other gems.

A quote from their Trivia column tells of a not so optimistic beginning back in 1969, a membership total of 74 in 1976, and the winning of the International 10-10 CW Contest in 1982. I wonder what their outstanding trivia will be for the 1990's??

From the published minutes of the February meeting written by Leighton Bunce, KN4ZZ, the club is active in a MS walk in March, still trying for a repeat 10-10 contest win, has a successful class going for new licensees, and supports three repeaters.

ENC Repeater Election

The ENC Repeater Association held its annual business meeting and re-elected President Doug Burt, WB4UOU, and Secy/Treas Jean DuPree, KB4OHX. Gene Fegely, K3EJG, is the new VP, and David Jones, WD4LVN; Bob Fox, KB2XI; Ken Allison, K6CIL; John Blizzard, N4HAJ; Larry Schwartz, WA4RHY; plus Frank Dickens, N4CAS, fill out the executive board.

New officers for the Grifton Repeater (ENC) are Secretary Jean DuPree, KB4OHX, VP Gene Fegely, K3EJG, and President Doug Burt, WB4UOU. (Photo by Bob McNeil)

Dave, WD4LVN, is the new net coordinator for the group which meets nightly at 8:30 on 146.685 to pass traffic, and every Thursday at 9;00 for club business. The group also had a $500 donation given by the Kinston Hamfest committee to add to the coffers.

Incorporation for 220 Group

Murray Adams, WA4DAN, president and trustee of the ENC 220 Repeater Group, reports that the incorporation as a non-profit organization is nearly complets, thanks to Attorney Hugh Cox, and Johnny Peterson, KM4TW.

The group is planned to get the Trenton 224.70 machine operational in March at the 1255 foot level with a four-dipole receive antenna at 1300 feet, and a two-dipole transmit at the 1170 foot spot. Coverage will be to the south, to allow the Grifton machine to cover the north.

The Group also received a $500 donation from the Kinston Hamfest Committee, reported Bob McNeil, W4MBD. A 220 repeater is in the offing for Morehead City, and a new 220 machine has opened on 224.360 in Grimesland, covering Pitt and part of Beaufort Counties. said Murray.

Other News and Notes

Another area of ham radio may also be avilable in the East as Craig Willis, K4DHZ, is working to get a DX packet cluster working. Details are not available at deadline, but I will try to find out something for the next issue.

The New Bern ARC held a successful auction recently, earning over $600 for their depleted treasury. A major item was the donated crank-up tower and antenna system donated to the club by Frank Guyer, W2VSV, who is moving from the area. Charlie Bremmer, KD4OFT, now has the pleasant task of dismantling and moving his bargain. Trustee Tommie Phelps, WA4EME, was the entertaining auctioneer.

The recent storms that have scourged Eastern Carolina saw much activity on the many repeaters that managed to keep operating during the power outages. I monitored one of the newest repeaters, Carteret County's 145.45, and heard ARES Jo Ann Taylor, WD4JYR, putting everyone on watch, but no real emergencies were reported.

Several hams who took the long drive from the Charlotte Hamfest in the midst of wind and rain, remarked they were quite glad to have operating repeaters to keep them in touch. Kudos to all those clubs who provide emergency power and backups.

WEST VIRGINIA NOTES

-by Ted Wolfe, WD4KHL

Send News To: P.O. Box 133, Cabin Creek, WV 25035

After several years of comment like “Get rid of the Commodore and move up to an IBM or clone,” I finally made the move and on 30 January took delivery of an older IBM model from Gary Housholder, K8NYG, in Dunbar. I got one with a 20-meg hard drive, one 5-1/4 inch floppy drive, one parallel and two serial ports, a monochrome (green on black) monitor, and a new 101-key keyboard. I already had a parallel printer I could use with the new setup. So the column for this issue is being submitted to the editor on disk.

I also have a new BAYPAC BP-1 packet modem with BAYCOM software from Tigertronics. I shortly expect to have another German packet program ESKAY PACKET, or SP for short, installed on my hard drive. I understand it will work through the BP-1 modem. Still, I plan to hold on to the old Commodore 64 and Digicom with its associated modem, drive and monitor as a backup.

I feel comfortable leaving it on 24-hours a day whereas I do not feel the same about the IBM. Besides, I have a fine word processing program for the IBM and spend a lot of time off-line on packet using the WP and other programs on the IBM.

* * * * *

News from the Mid-Ohio Valley Amateur Radio Club (MOVARC) in Parkersburg via letter from Ron Ferrell, WD8RGZ:

The club has installed a Cellular Phone autopatch on its 146.745 Mhz repeater. If I understand Ron correctly, it would have been difficult to get a phone line to the repeater site. Instead they purchased an interface called Celljack and a cellular phone as the primary means of interconnect. Sounds like an idea other clubs might use.

The club has also purchased a 440-Mhz remote base for the ACC-96 controller on 146.745 which permits members to dial up any of the local and not-so-local 440-Mhz repeaters in the two state area. Other remotes are planned for 2-meters, followed by 10-meters and 220-Mhz. Early this year 250-feet of half inch hardline was installed on the club's tower up to the antenna to clean up the signal and stabalize the system.

* * * * *

MOVARC has chosen Sunday, Aug 8, 1993, as the date for its 5th annual Hamfest and Computer Show. The site will be the Mineral Wells 4-H campgrounds. Overnight lodging will be offered this year for a nominal fee (bring your own sheets, pillows, blankets, etc.).

The club has purchased a new 14-foot Pace Cargo trailer (for Field Day, hamfests, and such uses) equipped with removable console and roof rack to accommodate moving towers for Field Day use.

Volunteers from the club have been assisting the Belpre, Ohio, Volunteer Fire Department for Friday night Bingo games for fund raising.

MOVARC meets once a month at the Wood County Airport between Parkersburg and Marietta. The club 2-meter net is on 146.745 each Wednesday night at 8:30 p.m.

* * * * *

The Fayetteville, WV, hamfest on Sunday, Feb 21, was another success for the Plateau ARC. This year I got there about an hour after the hamfest opened at 8:00 a.m., and the crowd then was shoulder to shoulder in the aisles. In previous years I had not arrived until around eleven, so the crowd this year was an eye-opener. Any more growth and the club will have to find a place bigger than the High School gymnasium.

The FAYEWV D.A.R.E.N. node was down and a delegation from the hamfest went to the nearby site to effect repairs so the talk, on the Digital Amateur Radio Emergency Network could proceed.

Ken Harris, WA8LLM, from Parkersburg led the forum. He is one of the sparkplugs behind DAREN. Almost everyone in attendance already knew something of the net and were interested in further development across the state.

I ran into Olie Rinehart, WD8V, at the hamfest and he passed along some information. He knew I was interested in finding my complete Grid Square location. I knew, from an old ARRL Grid Locator map someone gave me a couple of years ago that I was in square EM98. I didn't know until recently that the designator, to be more explicit, goes to six characters.

With the information provided by Olie I now know that Cabin Creek, WV is in grid EM98BJ.

And that tale revolves around the adventures of Sam, W8NCD, and me and our sojourn to the Charlotte, NC, hamfest.

We ignored the weatherman in Charleston, who had predicted snow several times in the two weeks previous and it failed to show up. We planned an overnight in Charlotte to take in the Saturday portion of the hamfest and return home that evening.

We departed Charleston about noon Friday. We drove in rain most of the way to Charlotte, arrived around 5 p.m., checked into a motel, and scouted the location of the hamfest set to open Saturday.

The next morning Sam and I had brunch with a nephew of his who lives there in Charlotte, so didn't arrive at the Merchandise Mart till about noon. It wasn't till we got in the parking lot that sleet and snow really started falling. After getting inside Liberty Hall, we went to windows to glance out often to observe the continuing storm outside.

For those of you who were there, none of this is new. They closed the hall about an hour earlier than planned and urged attendees to be careful driving home. Sam and I decided we could not possibly return to WV that night, so booked into the motel for another night.

Power, heat, lights, and even the telephones in our motel went out at 8:30 p.m., caused--no doubt--by high winds playing havoc with powerlines. Power, and the heat, came back on in four hours.

Before Sunday breakfast we had to have a flat tire repaired.

We decided to drive as far northward as we could before again holing up somewhere warm. Incrediably we got past Fancy Gap, the mountains near Hillsville, Va, and on into

Continued on Page 42

SERA QUARTERLY FINANCIAL STATEMENT

-by Ray Adams, N4BAQ, SERA Treasurer

FINANCIAL REPORT FROM JANUARY 1 TO MARCH 31, 1989, 1990, 1991, 1992, AND 1993

Dues	$6/$15	$6/$15	$6/$15	$6/$15	$6/$15
REVENUES	1989	1990	1991	1992	1993
Advertising	$ 2,610.00	$ 4,533.10	$ 2,706.00	$ 2,464.00	$ 4,046.40
Assocaite membership dues	2,812.00	2,075.00	2,836.00	3,388.15	3,415.50
Full membership dues	3,166.50	5,179.50	4,670.50	3,043.75	4,837.00
Decals	31.00	- 0 -	64.75	47.25	- 0 -
News stand sales					578.75
Contributions	122.10	- 0 -	50.00	100.00	- 0 -
Interest	70.89	98.01	125.16	139.74	49.75
Other	- 0 -	64.00	- 0 -	27.75	- 0 -
	$ 8,812.49	$11,949.61	10,452.41	9,210.64	$12,927.40
EXPENSES					
Journal Distribution	$ 1,447.21	691.25	795.50	969.81	1,437.89
Journal Production	4,927.53	4,571.37	4,787.26	4,883.95	8,507.35
Travel and Meetings	1,489.57	648.96	847.86	972.25	2,228.87
Miscellaneous	95.75	94.00	75.00	- 0 -	450.00
Office Expenses	230.64	97.58	526.12	831.96	3.00
Postage - other than journal	851.81	337.16	569.61	1,334.93	221.29
Printing - other than journal	312.96	- 0 -	50.75	692.05	133.55
Telephone	256.00	252.93	534.28	466.69	669.11
	$ 9,611.47	$ 6,693.25	$ 8,186.38	$10,151.64	$13,651.06
REVENUES OVER (UNDER*) EXPENSES	$ 798.98*	$ 5,256.36	$ 2,266.03	$ 941.00*	$ 723.66*
Balances, Beginning of year					
Expenses Advanced	$ 900.00	$ 900.00	$ 900.00	$ 900.00	$ 900.00
Invested in office machines	3,026.00	$ 3,203.60	2,749.00	4,340.50	4,475.00
Cash in Bank	5,393.35	4,156.54	9,130.27	12,958.28	8,198.64
	$ 9,319.35	$ 8,260.14	$12,779.27	$18,198.78	$13,573.64
EQUITY TO ACCOUNT FOR	$ 8,520.37	$13,516.50	$15,045.30	$17,257.78	$12,849.98
Less: Expenses advanced	$ 900.00	$ 900.00	$ 900.00	$ 900.00	$ 900.00
Invested in office Machines	3,026.00	3,203.60	4,363.18	5,833.00	4,475.00
	$ 3,926.00	$ 4,103.60	$ 5,263.18	$ 6,733.00	$ 5,375.00
CASH IN BANK	$ 4,594.37	$ 9,412.90	$ 9,782.12	$10,524.78	$ 7,474.98

ROANOKE MAYFEST '93

HAMFEST AND COMPUTER SHOW

CHANGED LOCATION and DATE to:

SALEM CIVIC CENTER

Sunday May 23, 1993

SALEM, VA

AN APPROVED ARRL EVENT PRESENTED BY

THE ROANOKE VALLEY AMATEUR RADIO CLUB

GRAND PRIZE:	$600.00
SECOND PRIZE:	$300.00
PRE-REGISTRATION PRIZE:	$100.00

TALK-IN ON 146.985 MHZ (-600) & 442.5 +

TICKET INFORMATION	
General Admission - Pre-registration	$5.00
At the door	$6.00
COMMERCIAL DEALER SPACES	
1 -8 ft table (includes 2 chairs)	$20.00
Each additional table	$20.00
Non-Commercial exhibitor must also purchase General Admission Ticket	
INSIDE FLEA-MARKET TABLES	
1 -8 ft table (includes 1 chair)	$10.00
PRICE FOR ELECTRICAL HOOK-UP	$15.00
UNLIMITED TAILGATING AVAILABLE ea.	$5.00

UPGRADE EXAMS: 9:00 A.M. (No Novice Exams:) VEC Exam: Send 610 and a copy of current license and any Certificates of Completion along with a check for $5.60 payable to: WCARS/VEC. Bring your original license, and certificates to exam.

Mail to: FRED HORTON
KZ4Y 4024 Okland Blvd., Roanoke, Va. 24012

For more information, please send S.A.S.E. to KZ4Y
Testing Registration Deadline is May 10, 1993

LADIES: CONVENIENT SHOPPING !

MEALS: Easy distances to many local restaurants

SHOW HOURS Sun. May 23, 1993, 9:00 A. M. - 4:00 P.M.

SEE YOU THERE !

file=mfflr932.cdr

Dealer Set-up .....Doors open 6:00 A.M. for set-up Sunday May 23, 1993.

Dealer & Flea Market information

Home: (703) 343-6794
Work: (703) 342-8513
FAX: (703) 342-1250

PRE - REGISTRATION DEADLINE MAY 15, 1993

PLEASE SEND S.A.S.E.

SHOW HOURS: 9:00 A.M. - 4:00 P.M.

1993 MAYFEST PRE - REGISTRATION FORM

Mail Check, S.A.S.E., and this completed form to:

R.V.A.R.C., P.O. BOX 2002, Roanoke Virginia 24009.

WE MUST RECEIVE THIS BY MAY 15, 1993

NAME: ______________________ CALL: ______________
ADDRESS: ______________________ PHONE: ______________
CITY: ______________________ STATE: ________ ZIP: ________
I would like ________ Hamfest tickets @ $5.00 each .... $ ________
Reserve ________ Commercial Dealer Spaces @ $20.00 each .... $ ________
(1 - 8 ft. table, includes 2 chairs)
Reserve ________ Each Additional Dealer Table @ $20.00 each .... $ ________
Reserve ________ Inside Fleamarket Spaces @ $10.00 each .... $ ________
(1 - 8 ft. table, includes 1 chair)
Reserve ________ Outside Tailgate Space @ $5.00 each .... $ ________
Reserve ________ Electricity Hookup @ $15.00 .... $ ________
Make checks payable to R.V.A.R.C. TOTAL$ ________

NWFLYR4.CDR

WEST VIRGINIA NOTES CONTINUED

Wytheville, Va, the worst part of our trip home. There we discovered traffic at the moment was not moving out of Wytheville West toward Bristol or North toward WV. Virginia authorities had closed the Big Walker Mountain tunnel on I-77 north of Wytheville--our route home.

The traffic was backed up bumper to bumper across all lanes of the Interstate (I-81 and I-77 use same roadway for several miles at that point). We opted to use a crossover designed for police and emergency vehicles to reverse our direction of movement, drove on to Pulaski and checked into another motel.

Sam carried the same HF rig mounted in his pickup as he used on his trip to Alaska last summer. We also had a 2-meter handheld, and a Sony radio capable of picking up local broadcast and FM and shortwave stations, so we were not without communications.

It was surprising how many hams we worked on 146.52 simplex in the jamup. A lot of other traveling hams were in the traffic bottleneck. Thanks to local ham advice to take the Frontage or access roads which parallel the Interstate we got around a 7-mile backup on I-81 and into Wytheville. From there we went north on old US 52--it was snow covered--to the hazmat diversion cutoff. Taking that cutoff we emerged onto I-77 just south of the Big Walker Mountain tunnel and by this time traffic was moving single file through it, and for the next 20 or so miles.

Once we got to Bluefield we were home free. We saw more clear, dry pavement on the WV Turnpike than anywhere else up to that point. All lanes were open, so Sam dropped me off at home at 5:40 p.m. Monday evening. I couldn't get in my back door because of the snowdrift. I had to fight thru to the front porch steps and get inside that way.

The Charlotte Observer Sunday paper on 3/14 called it "the storm of the centry," but Sam and I will remember it as the year we got stuck going to the Charlotte hamfest. By the way, I hope the storm did not financially cripple the hamfest this year.

* * * * *

Backtracking to February for the following:

Phil, K8MHR, received a nice letter from Cynthia Taylor in Gallia County, Ohio, dated 23 Feb, thanking him for his assistance and the offer of the Remote Base capability of the 146.640 Mhz repeater that same day during an emergency. An army helicopter had crashed in remote southern Gallia county about 12:30 p.m. Amateurs were first on the scene. Local communications failed them due to terrain considerations. They moved the traffic to the WB8EZR repeater across the Ohio River in West Virginia and used it from about one o'clock till 3:00 p.m. as the rescue effort continued. The pilot perished in the accident.

The letter on MOVARC letterhead was also signed by two of that club's members who were involved in the rescue effort--Thomas R. Beaver, KD8GI, and Michael Null, N8HPR. The letter also thanked those amateurs who chose to standby ready to assist if needed but who kept off the repeater while the emergency traffic was handled.

Phil passed along the contents of the letter to Dwight in Huntington--his call is on the repeater. And my reaction upon getting this from Phil was that MOVARC is really sharp in Public Relations in getting off a letter of thanks the same day they made emergency use of the Huntington-Charleston area WB8EZR repeater. Fine work, fellows!

* * * * *

In February the Kanawha ARC moved its regular meeting site from the South Charleston City Hall annex to the Charleston City Hall. The meeting was held in the city's "War Room," the room from which emergency situations are handled. Afterward, in small groups, those in attendance were given a tour of the Charleston Metro 911 center.

Thanks go to David Sweeney, MEOC Director, for his hospitality; Kent Carper, KB8NJI, for the idea; Bill Loftis, N8RKU, for his help; and the entire Metro staff who assisted with the tour for the 54 KARC members and guests who attended that night.

Afterward, I commented to someone that I would also like to have seen the Charleston PD dispatch room. It is then that it was explained to me that I had seen it as a part of Metro 911. So it fell into place, the officer over in the corner handling all the highlighted in red incidents was dispatching for the city PD. In the same room other officers handled the Sheriff's Department dispatching and fire and emergency (ambulances) vehicles. The scene was so soft and subdued you hardly realized this setup was handling real time emergencies. Now, when monitoring my scanner, I can visualize the center from which all this activity is being handled.

* * * * *

Incidentally, Bill Hunter, K8BS, made a fine recovery from his heart surgery. I saw him up and around at the annual installation dinner for KARC officers held at Rose City cafeteria in South Charleston on January 9. Those new officers to serve in 1993 are: Hal Turley, KC8FS, president; Bernard Clark, W8JDF, vice president; Ann Rinehart, KA8ZGY, secretary; Bill Hunter, K8BS, treasurer; Oliver Rinehart, WD8V, program director; Doug Sweeney, N8AJC, publicity director; and Hal Turley, KC8FS, editor of the "Splatter."

Among new hams just receiving callsigns recently was Randy Damron. Ann Lancaster, wife of John W8GDP, received her new callsign, N8UZT, after passing the Tech exam. There were also a number of upgrades following successful completion of exams at the Fayetteville hamfest.

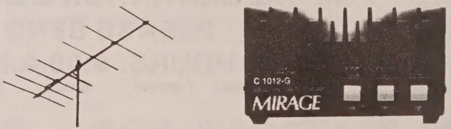
* * * * *

From the KARC "Splatter:"

There are two new 2-meter repeaters on in the area. Greg, KB8NJH, has his up and running on 147.210 Mhz providing coverage up Elk River and Interstate 79. And the WB8FEQ repeater on 145.210 Mhz out of Huntington is operational from a location atop the Channel 13 TV tower. It is said to now have coverage comparable to the 146.640 repeater.

The sign on message for the WB8CQV.WV.USA.NA bbs recently has carried a message for hams to try out the new 10-meter repeater located near Charleston. The input is 29.54 Mhz with output on 29.64 Mhz. There is also another input via a link through the 444.95 Mhz repeater.

Continued on Page 43



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EXCEPT HF WEEKENDS

COMET

01BASE ANTENNAS

CA-62DB	6-METER BASE/RPTR-----6.5DB.-22 FT.	119.00
GPX-2010	146/446MHZ BASE/RPTR--9.5/13.2db---	199.00
CA-2X4MAX	146/446MHZ BASE-------8.5/11.9db---	169.00
CA-2x4FX	146/446MHZ BASE-------4.5/7.2db----	95.00
CA-ABC 23	146MHZ BASE/RPTR------7.8db--------	89.00
CA-ABC 21	146MHZ BASE/CONDO-----3.4db-3.4ft--	44.00
CA-712EF	440-450 BASE----------9.0db--------	89.00
NCG-1422B	146/220MHZ BASE-------2.15/3.4db---	75.00
CX-725	50/146/446MHZ-TRI--2.15/6.2/8.4----	129.00
CA-2X4WX	146/440MHZ BASE/REPEATER-----------	129.00
SUPER-22---	220MHZ BASE/REPEATER-6.6DB.-5.11ft.	109.00

MOBILE ANTENNAS:

FL-67S	146/446MHZ MOBILE-----4.5/7.2db----	74.00
FL-62S	146/446MHZ MOBILE-----3.5/6.2db----	59.00
CA-2x4SR	146/446MHZ MOBILE-----3.8/6.2db----	58.00
CA-2x4MB	146/446MHZ MOBILE-----4.5/7.0db----	59.00
NCG-1422M	146/220MHZ MOBILE-----2.15/3.4db---	54.00
CA-220JR.	220MHZ MOBILE-----3.4db--------	34.00
CHL-185	2 METER----MOBILE-----4.1DB--------	42.00
CX-224	146/224/446MOBILE---2.15/3.6/6.0DB-	69.00
CHL-23J	146/446MHZ MOBILE---2.15/3.8db-20"-	28.00
CHL-21J	146/446MHZ MOBILE------/2.15DB-12"-	24.00
CA-430HG	440MHZ-----MOBILE------5.0DB-30IN.-	39.00

HT ANTENNAS:

CH-72S	146/446MHZ-HT-------/3/2--15"-BNC--	$26.00
CH-704	146/446MHZ HT-----------------BNC--	29.00
CH-200TX	146/446/800MHZ-HT-2.3/3.4/5.5-BNC--	44.00

DUPLEXERS

CF-416A	146/446-W/COAX--UHF/UHF/UHF--------	$44.00
CF-4160I	146/446-W/O LEADS-UHF/UHF/N--------	40.00
CF-4160K	146/446-W/O LEADS-UHF/UHF/UHF------	40.00
NCG-1422D	146/220-W/LEADS UHF/UHF/UHF------	49.00
CF-350	30/50MHZ-W/LEADS UHF/UHF----------	38.00
CF-520	50/140-470-W/LEADS-UHF/UHF---------	38.00

TRIPLEXERS

CFX-514	HF/146/446-W/LEADS-UHF/UHF/UHF-----	$59.00
CFX-324----	2MT/440/220 W/OUT LEADS------------	79.00

MOUNTS:

MS-5LXMM	HD--MAG MOUNT--UHF/CONNECTORS-BEST-	$45.00
MS-3FMM	HD--MAG MOUNT--UHF/CONN------------	35.00
MG-SRMB	REG.DUTY-MAG MOUNT-UHF/CONN--------	32.00
UB-ML	UNDER BUMPER RV MOUNT--------------	55.00
RS-17	TRUNK BRACKET----------------------	9.00
RS-21	HATCH/TRUNK-ADJUSTABLE-360 DEG.----	28.00
RS-80	GUTTER MOUNT-----------------------	28.00
RS-81	HATCH/TRUNK-ADJ-360DEG.PRESTIGE----	28.00

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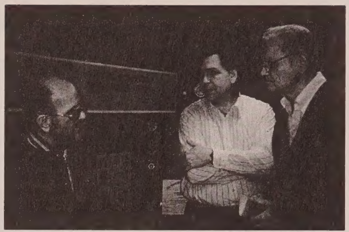
SAT 9 AM 2 PM
EXCEPT HF WEEKENDS



KARC member Bill Hunter, K8BS and club President Hal Turley, KC8FS (center), confer with a visitor during a recent club meeting. - photo by Same Moore, W8NCD

New 1993 officers for PARC in the Fayetteville/Oak Hill area are: Bob Smith, WB8KAD, president; Frank Mansfield, KA8DRN, vice president; Mike Vargo, WB8WKO, secretary; and Buzz Collins, K8CFT, treasurer. Thanks to Buzz for forwarding the information to me.

* * * * *

John Long, K8CAY, became a Silent Key on Saturday, Mar 6. He died at his home near Barboursville (Huntington area) after a long illness. I last heard him the week before his demise when he showed up in the wee hours of the morning on the St. Albans 147.150 repeater after the close of one of our "Late Night, High Wind, Smokeblowers Net" sessions.

* * * * *

Two Valley area hams now have callbooks on line. KA8SVH runs his through his SP software. Brian, N8PQI, says he also has the callbook on line when his station is up.

Right before deadline, I received two newsletters in the mail. One included the WVARI newsletter for March. Part of the material I will use in the main storm story.

WVARI's roster has now grown to 110 members, according to Membership Services chairman Wesley Holstein, N8WBR. Mike Steele, KE8PB, the WVAR librarian has a number of video tapes for loan out to interested hams. They cover a number of amateur radio related subjects. John White, KA8UYU, recently donated an 8' by 8' metal building to the club.

The second letter was from the Tri-State ARA at Huntington. It appears to me, if my memory isn't playing tricks on me, that the March/April T.A.R.A. NEWS sported a new look! Eighteen prospective hams turned out for TARA's latest license class. It is held every Friday night at seven at the GVFD.

The mailing included several pages of data and codes and procedure outlines for use of the new controller on the W8VA club repeater situated on Rotary Park Hill in Huntington. The new repeater is a Kenwood TKR-720 running 15 watts into a TE systems amplifier at 100-watts. The controller is by ACC, with Mailbox, Bulletin Board, Emergency Autodial, autopatch and features.

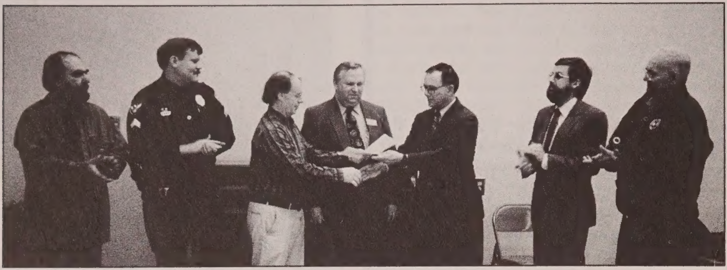
The mailer also included a brochure on the Consolidated Comm. Emergency Response Cen. (Huntington's 911 system).

* * * * *

And with that we've reached the end of another column. So till next issue, the August Journal, I hope you have an enjoyable summer and get to take in many hamfests.

SUPPORT YOUR SERA!

Brightleaf ARC Receives Two Grants



Brightleaf ARC officers accept one of two grants given to them recently at their 26th Anniversary meeting. From left, Len Downing, N4SFB, Board Member, Byron Highland, KA4KGZ, 1st VP, Bernie Nobles, WA4MOK, Pres., Mike Langley, KD4MTT, Sec., Larry Siegler, on behalf of Burroughs Wellcome, James Eubanks, KD4JOV, Treas, and Thomas Parson, KD4AFH, 2nd VP. *-Photo Submitted by KA4WFS.*

-Submitted by Walter Verdick, KA4WFS

The Brightleaf ARC (NC) was awarded grants from two local businesses at its 26th Anniversary meeting recently.

Larry Siegler, General Site Manager for Burroughs Wellcome, presented the club a grant in the amount of $3000.00 to be used for the purchase of an emergency communication control center trailer. The grant was made through the company's Community Service Program.

The second grant in the amount of $500.00 was presented by Lee Hemink of Procter & Gamble and was made through P&Gs Employee Volunteer Support Program. Both grants were accepted by Bernie Nobles, WA4MOK, Club President.

The program for the evening was given by Murray Adams, WA4DAN, who discussed and showed slides of a DX-Pedition to the uninhabited island of Desicheo, 15 miles of the coast of Puerto Rico.

Around The Area! (NC)

Edna KB4BOF holds up some cute dolls she has been selling at some of the hamfests around. She said the ladies, and kids love them. -Photo by Joe David, KC4EPX

BLUEFIELD HAMFEST
COMPUTER FAIR

AN OFFICIAL ARRL HAMFEST

SATURDAY, JUNE 19, 1993 9:00 AM TO 3:00 PM
BRUSHFORK NATIONAL GUARD ARMORY
(1 MILE NORTH OF BLUEFIELD, WV ON ROUTE 52)

INFORMATION

S.A.S.E. to:
Bluefield Hamfest
Rt. 5, Box 457
Bluefield, WV 24701
(304) 325-3058

F.C.C. EXAM

Bluefield State College
Basic Science Building, First Floor, 9:00 AM
Copy of License
Completed 610 Form
Walk-Ins Accepted

ADMISSION
$5.00 at door
$4.00 (Senior Citizens)
Children under 12 free

TABLES $5.00 each

Ladies Crafts Welcome
Inside Flea Market & Tailgating if Desired

TALK-IN

145.49
(B.R. 549)

PRIZES

Hourly

SERA Dues Increase

Associate membership dues for repeater users is now $8.00 per year. Each Associate Member receives the Repeater Journal each quarter for a year.

David Ward, KA4LVO, Membership Chairman indicated that any memberships that are received after April 1, with the old fee, will be credited for 9 months of membership.

Full Membership, for Repeater owners is now $20.00 per Calendar Year, (all memberships expire Dec. 31. Repeater owners wishing to join or renew their membership at this time through the end of the year, may do so at the pro-rated cost of $15.00. Two persons may be named to receive the Repeater Journal.

Repeater owners may list ANY repeaters under their sponsorship or control as Full Member repeaters.

BARC Special Event Station

-From James Blythe, NX4B

The Briarpatch Amateur Radio Club (BARC) will commemorate the Grayson County, Virginia Bicentennial with two special events during the week of June 27 - July 3, 1993.

Club members will operate their individual stations June 27 - July 2 using their own calls. A special QSL may be obtained by sending a QSL and SASE to each station contacted.

Club members will operate the Special Events Station NX4B from the County Seat of Independence on July 3 from 1700-220 UTC in the General phone portions of 20 and 40 meters, and the Novice portion of 10 meter phone.

A special certificate will be available for the July 3 Special Event. Please QSL **James Blythe, NX4B, 202 Locust St., Galax, Va. 24333** with large SASE for the certificate.

East NC Packet System Operators Attend

CDCC Meets at Raleigh Hamfest

-by Gary Pearce, KN4AQ

Two related issues dominated the packet system operators meeting held at the Raleigh Hamfest on April 4th: packet operation above 147 MHz, and the relationship between packet system operators and SERA (the South-Eastern Repeater Association).

Those issues and others raised strong emotions among those attending. Before seriously addressing the issues, Eastern Carolina hams will decide how to organize -- they may form an independent group, or become an extension of the CDCC (Carolina Digital Coordinating Council).

The meeting was the result of my invitation to the CDCC and any other interested hams in the Eastern part of the state. I've learned that after there had been a few false starts on a statewide packet organization, the CDCC has been successful in bringing system operators together from Greensboro Westward across the state of North Carolina. They have begun frequency coordination, improved the existing 145.01 network linking system, begun linking on 220 and 440, and started a high-speed network.

Some packet networks in the East have also begun experimenting with advanced features, but without the benefit of frequency coordination or communication with many other system operators. New systems going up found themselves bumping into existing operation, both packet and voice.

Meanwhile the 145.01 network is becoming old and overloaded, some areas of Northeast NC have no connection to the network at all, and PacketCluster systems have developed independently, without much coordination with other packet operations.

Wayne Williams' (K4MOB) editorial in the February Repeater Journal has triggered an ongoing debate about packet operation above 147 MHz. Wayne's position, that 147.42 - 147.57 are band-planned voice channels and that packet systems in that spectrum should move to the bottom of the band, struck a nerve.

There are several systems using 157.51, 54 and 57 across the state, and a 9600 bauds network is being developed on 147.48. Their operators were looking for a CDCC endorsement for their operation (so far the CDCC has no official position).

A strong complaint at the meeting was that SERA has unilaterally "allocated" frequencies for voice and packet, meanwhile maintaining that they are a repeater group with no fundamental interest in packet. The packet operators felt disenfranchised, and believed that a cohesive organization was needed to speak for their interests. There was neither time nor enough representation to decide at the Raleigh meeting how to best organize, but I volunteered to put together another meeting soon to keep the ball rolling.

One very positive note was the presence of system operators from two of the states large PacketClusters, Raleigh and Charlotte. (Sorry if I missed anyone -- no "attendance" was taken, so I'm reluctant to mention too many names). When the idea of BBSs and Clusters sharing high-speed network trunks was discussed, a typical problem surfaced: PacketClusters feel their traffic (announcements of DX stations heard that may only be on-the-air for a few minutes) is more time-sensitive than most others. If they share a network, they want priority, or at least the assurance that the "DX Spots" will be delivered without delay. Mark, WA3JPY, from New Bern, will be making such a shared network leg available to a new PacketCluster in Morehead City soon.

And many other issues remain -- the concept of "route security" on the network, how to extend the UHF 9600 bauds network to other parts of the state, how notes can most efficiently talk to each other . . . there's plenty to talk about.

Charles, WB4WOR, from the CDCC noted that once the groundwork for communication between operators has been laid, these problems aren't that tough to work out.

Keep an eye on your local BBS or PacketCluster -- I'll be suggesting a

Continued on Page 46

ROA, #ROA, #RKE22, DXBVDS, DXINT, DXNC, DXCLT, DXLEX, DXRKE, DXGSO

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CDCC Meets at Raleigh

Continued from Page 45

meeting time and place, gathering feedback, and looking for agenda items soon. You can reach me at:

KN4AQ @ K4IWW.NC.USA.NA or on the PacketCluster (W4DW node) or the old way, at (919) 233-8306, but like you, I'd like to keep the long distance calls down and spend the money on radios.

North Carolina Packet Networks

As of April 1, 1993

The following has been compiled by the coordination database of the Carolina Digital Coordination Council, comfirmed sources outside of the CDCC, or known in the public domain.

This list is maintained by the Carolina Digital Coordination Council, NOT the Southeastern Repeater Association. CDCC and SERA are NOT connected in any way. This list is published as a service of the ***Repeater Journal*** for the CDCC and digital interests.

Legend:
+ denotes CDCC member
* denotes coordination

Full Service Bulletin Board Systems

Location	Call/Alias	Frequency
+Asheville	N9BE/HVLBBS	145.63
*Boone	KA1TB	145.59
+Charlotte	N7IJI/BBSCLT	145.05
+Charlotte	W4BFB/CLTBBS	145.05
Elizabeth City	N4QLD	145.01
+Gastonia	WB4KDF-4/GASBBS	145.07
+Greensboro	WB4WOR-4/GSOBBS	145.01/.65
+Hickory	WA4MDW/HKYBBS	145.61
Jacksonville	WF0L/JAXBBS	145.01
King	WB4UFM/STKBBS	145.09
*Lumberton	KF4WQ-2/LBTBBS	145.01
New Bern/Grnvl	WB4UOU/UOUBBS	145.63
Raleigh	K4IWW-2	145.01/7.54
Roanoke Rapids	N4WFU	145.01
*Wilkesboro	KC4KRR/WILBBS	145.01/.05
*Wilkesboro	KC4XE/XEBBS	145.05
Wilmington	N4CCK-2/ILMBBS	145.69
*Wilmington	WD4JBL-2/ACABBS	145.69
+Winston-Salem	N4UFF/INTBBS	145.07/.69

Full Service Digipeater Nodes

Location	Call/Alias	Frequency
Asheboro	KJ4AV-1/ASHB	145.01
+Asheville	W4MOE-1/NCAVL	145.01
+Asheville	W4MOE-2/AVL63	145.63
Burlington	AC4DZ-9/BUY09	145.09
Carthage	N4UGM-1	145.01
+Charlotte	W4BFB-1/NCCLT	145.01
+Charlotte	W4BFB-2/CLT	145.05
Clinton	KB4NOZ-5/NCCTZ	145.01
*Concord	K4CEB-1/CON	145.67
Durham	WA4WTX-1/DNC	145.09
Elizabeth City	WA4VTX-1/ECITY	145.01
Fayetteville	WA4FLR-8/FAY	145.01
+Gastonia	WB4KDF-7/GASTON	145.07
Goldsboro	WD4JPQ-2/GSB	145.01
+Greensboro	WB4WOR-5/NCGSO	145.01
+Greensboro	KD4ANI-5/GSO	145.65
Greenville	WD4JPQ-1/PGV	145.01
+Hendersonville	WA44KNI-1/BRA	145.01
+Hickory	KD4OM-1/NCHKY	145.01
+Hickory	WA4MDW-1/HKY	145.61
Jacksonville	K6CEL-1/NCJAX	145.01
Jacksonville	WF0L-2/JAXLAN	145.63
King	K4JYH-9/STK09	145.09
Laurinburg	K4QO-1/NCLBG	145.01
*Locust	KC4FWC-1/LOCUST	145.69
*Lumberton	KF4WQ-3/NCLBT	145.01
*Lumberton	KF4WQ-4/LBTLAN	145.05
*Lumberton	KF4WQ-6/LBTHS	147.48
Manteo	WB8PAG-2/DARE	145.01
+Marion	KB4UNZ-5/MRN	145.61
*MoreheadCity	WA4RHY-9/BOGUE	145.01
Morehead City	WA3JPY-3/MRHLAN	145.63
New Bern	WA3JPY-1/EWN	145.01
New Bern	WA3JPY-2/EWNLAN	145.63
Plymouth	KB4ZAZ-1/PLY	145.01
Raleigh	KM4OX/RNC	145.01
Roanoke Rapids	N4WFU-1/RRNC	145.01
Rocky Mount	WF2G-1/RWI	145.01
*Salisbury	W4HG-7/SAL07	145.07
+Saphire	W4EHV-3/SFRE63	145.63
*Wilkesboro	KC4KRR-2/NCWILK	145.01
*Wilkesboro	KC4KRR-3/WILKES	
Wilmington	KB4NOZ-1/NCILM	145.01
Wilmington	KB4NOZ-3/ILMLAN	145.69
+Winston-Salem	N4UFF-7/INT07	145.07
+Winston-Salem	KC4HCY-9/INT69	145.69
+Yadkinville	N4VRD-9/YAD69	145.69

NOS (Network Operating System - TCP/IP)

Location	Call/Address	Frequency
+Charlotte	N7IJI-3/44.75.7.1	145.03
+Green Mtn	N4EUX-2/44.75.5.9	145.03
+Greensboro	WB4WOR-3/44.75.1.1	145.03
+High Peak	K4OLC-2/44.75.5.3	145.03
+Marion	KB4UNZ-3/44.75.5.7	145.03
*Shelby	W4NYR/44.75.5.5	145.03
+Taylorsville	WB4FQB-2/44.75.5.1	145.03
Winston-Salem	W4NC-3/44.75.3.1	145.03

DX Packet Cluster

Location	Call/Alias	Frequency
+Asheville	N4AA-5/AVLDX	144.95
+Hickory	KD4OM-2/HKYDX	144.93
+Raleigh	W4DW	145.09
*Stanley	N4ZC/STNC	144.93
Winston-Salem	W4NC-2/DXINT	145.63

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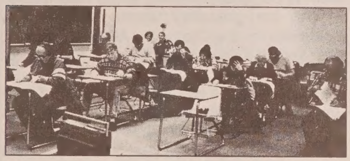
Norman Harrill, N4NH - Dedicated To Education

-by: Miriam Smith, KB4C

The Western Carolina Amateur Radio Society Education Program is currently in the process of accomplishing the unheard of. Under the guidance of Norman Harrill, N4NH, volunteer instructors are simultaneously teaching classes in two separate counties.

Novice and Technician licensing classes are being run in Asheville at Asheville Buncombe Technical Community College and in Clyde at Haywood Technical Community College. Students in the Haywood County classes would have been unable to travel to Asheville to attend classes. This undertaking has been very successful, but future classes in the two counties are likely to run consecutively and not concurrently. Many instructors are teaching in both counties.



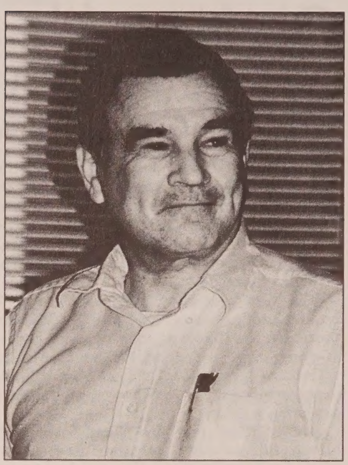
The scene is familiar in the Asheville area, as students study hard during classes initiated with the assistance of Norman Harrill, N4NH. Harrill has been active in conducting or coordinating ham radio classes for over 30 years. *-Photo by: Joe Davis.*

Norman has spearheaded the WCARS Education Program almost continuously since it began in 1978. When asked how many hams have obtained a license through his classes, he wouldn't even estimate a number.

Classes are held each spring and fall with an average of fifteen to twenty students per class, although the class in the spring or 1992 had sixty plus students. If the pass rate is assumed to be 60%, the number would be several hundred. If you add the people he tutored before the WCARS program, the result would be in the thousands range.

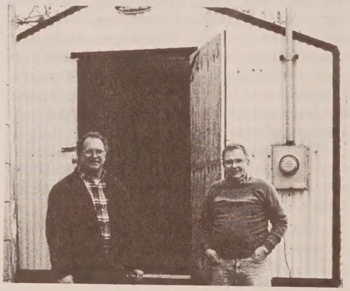
Norman began teaching ham radio classes in the 1950's while he was still in high school in Forest City, North Carolina. He continued to teach them during his military career as well as teaching for the Buncombe County Amateur Radio Club during the 1960's. It is unlikely that any other single individual in the Western North Carolina area has had more impact on the ranks of Amateur Radio than Norman Harrill.

In addition to teaching several chapters himself, Norman does not hesitate to take an instructors place when the need arises . His enthusiasm is contagious. One of the first things he tells new students is that the classes do not have any failing students - sometimes it just takes a little longer for some to succeed. His positive attitude is passed along to all instructors during planning sessions.



Norman Harrill, N4NH comes in with a smile on his face, as he instlls confidence in teachers, and students of ham radio. Harrill is credited with being responsible for thousands of new hams. *-photo by: Joe Davis.*

Around The Area! (SC)



Jim, KI4FL, Maxie, N4ENQ stand outside the building that houses the N4HWU-2 Packet BBS and the 145.15 repeater. The building is on Teyon Peak. -Photo by: Gary, WD8OXE.

Packet Guru, Jim, KI4FL sets up the N4HWU-2 Packet BBS on Teyon Peak in South Carolina. -Photo by Gary, WD8OXE

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Severe Weather Season

Oh No - It's Here Again!

-by Robert L. Smith, N4UFO

Well, it's here again. What's here you may ask?

Severe Weather Season of course. The week of February 22 thru 26 was severe Weather Awareness week. Here in Rutherford County we participated in the statewide Skywarn drill on Wednesday, Feb. 24, but the fun didn't end after the Skywarn drill on Wednesday.

The very next day most of North and South Carolina was placed under a Winter Storm Watch that was soon upgraded to a Warning that ended on Friday afternoon with snow and ice that varied from a light dusting to about 6 inches across the two carolinas.

Then, there was the biggie! Around March 9th or 10th, weather forecasters started telling us about the real bad story that might head our way.

Well they were right. It has now been called the worst weekend Winter Storm of the century, as the entire eastern portion of the nation came to an abrupt halt beginning on Friday March 12th and continuing on through Monday and Tuesday the 15th and 16th. Snow, sleet, rain and high winds paralyzed travelers, left thousands stranded on highways, and shut many metropolitan cities down. Power outages effected hundreds of thousands. Damages are being compared with "Hugo" the hurricane that came up the East Coast a couple of years ago.

The idea of our story is not to talk about what is past, but to possibly assist those who might not be aware of what is best for future storms.

Some Severe Weather Safety Tips

Many people get confused trying to determine the difference between a Watch and a Warning.

A Watch means there is potential for Severe Weather.

A Warning is issued only after Severe Weather has shown up on radar, has been sighted or has actually touched down.

Get yourself a tone alert Weather Monitor that is both AC and DC powered. This little radio receiver could very well save your life because it will give you an early warning of a Severe Storm approaching.

Tornado Safety Tips

Because they can develop so quickly, with little or no warning, the tornado's unpredictability is perhaps its most dangerous characteristic. Thus people must be able to respond at a moments notice.

1. When a tornado strikes, people need to find shelter below or near ground level. They should also be sure to go to the central interior section of a building, underneath sturdy furniture if possible. People should also stay away from windows, doors and electrical outlets.

2. It is very important for individuals to protect their heads and faces, regardless of where they take cover.

3. Battery operated radios and/or televisions should be kept handy to remain aware of conditions outside. It is also advisable to keep flashlights and candles around the house in the event of power failure.

MOBILE HOMES - Given their vulnerability to tornadoes and high winds, mobile homes should be evacuated as soon as possible during severe weather. Many mobile home parks have designated shelter areas. Where this is not the case, residents should go to ditches or other low, protected areas. *Be alert for flash flooding when in ditches or low areas.*

MOTORISTS - Cars are extremely dangerous in tornadoes and high winds. Motorists should seek cover in a permanent structure, or if necessary, in ditches or other low areas. Again, remember to be alert for flash flooding when in ditches and low areas.

We hope these few simple tips will help you get through another Spring and early Summer of Severe Weather season which is prevelant in this part of the country at this time of the year.

Editor's note: Smith is the Communications Officer and EMT with the Rutherford County, NC EMS. He has been a ham for 5 years, and holder of an Extra Class ticket. He serves as the ARRL EC and RACES Officer for his county.

The Repeater Journal!

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E. Tn. Repeater News

-by Tim Berry, WB4GBI

Happy Springtime! After the "blizzard" of 1993 dumped 24 inches of snow in East Tennessee, I'm ready for spring. Now is the time to move from snow damage to lightning damage..Ah, the joy of repeaters!

Heres the latest in repeater activity in East Tennessee:

Benny Peterson, WB4SQC, has coordinated a new 220 repeater to be located on Holston Mountain in Northeast Tennessee. The WB4SQC repeater is on 223.30-224.90 Mhz, and joins his fine 147.21 and 442.200 machines at 4200' AMSL. You are invited to check it out!

Jim Sayne, KD4IBW, has coordinated a new 220 repeater. His is on 223.10-224.70 Mhz and is located on top of Sharp's Ridge in Knoxville. The 1350' AMSL site should provide great coverage for the Knoxville area. Jim also owns the 443.675 repeater here in Knoxville, which has a new mountaintop home.

Scott Wyrick, KD4CWB, has coordinated not one, but TWO 440 repeaters for the Knoxville area - both are to be located on 3300 AMSL Greentop Mountain in Sevier County. The frequencies are 448.300-443.300, and 448.800-443.800. Look for them to be up and running in the near future.

We are presently working on a new frequency for the Crossville AC4AA repeater, and should have good news to report next time.

When was the last time you thanked your local repeater club or owner for the use of his machine? Take the time to let him know-your neat little portable just wouldn't be the same without it!

If you have some news about your repeater, why not let the SERA readership know? Drop me a letter, or call me on packet at WB4GBI @ KT4F. #METN.TN.USA. NOAM. Until next time, keep those repeaters up and running!

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Beacons - A Short Discussion and Tour

-by Dave Meler, N4MW

Have you noticed strange entries in the Tennessee SERA listings? This is because the SERA database includes beacon frequencies for information purposes. What are beacons and why are they on the air? This article will discuss beacons in general (the "lecture") and briefly describe each Memphis area beacon (the "tour").

Beacon transmitters provide benefits to amateurs both near and far. The unusual strength or presence of a received signal indicates enhanced propagation conditions which might otherwise go unobserved. Beacons also provide a dependable reference signal source to determine if receiver and antenna are working properly, especially on the bands where test gear is not readily available. Beacon reception reports and demonstrations help prove that technical obstacles to utilizing higher frequencies can be overcome. Experience receiving beacons tends to quickly dispel the mythical notion of "line-of-sight."

The Federal Communications Commission has rules permitting beacon operation (Part 97 sections 97.84 and 97.87). These rules define beacons as one-way transmissions conducted in order to facilitate measurement of radio equipment characteristics, observation of propagation or transmission phenomena or other related experimental activity. Summarized operating rules for automatically controlled beacons are:

- Operate one transmitter per band.
- Provide appropriate control provisions and procedures.
- Cease operation if so ordered by the FCC until problems are resolved.
- Operate within the following frequencies (in megahertz): 28.2-28.3, 50.06 - 50.08, 144.275 - 144.300, 222.05 - 222.06, 432.3 - 432.4.
- Below 450 MHz, use emissions N0N, A1A, F1B or J2A.
- Above 450 MHz, use any frequency or authorized emission type, with maximum audio or carrier frequency shift of 1000 Hz for J2A and F1B emissions.
- Operators must be Technician or higher class.
- Limit power to the minimum necessary not to exceed 100 watts.
- Identification in Morse must include the /BCN or /B callsign suffix.
- The maximum interval between identifications is one minute.

The amateur community provides additional beacon subband recommendations where not specified in the FCC rules. These subbands are (in megahertz): 902.2-902.4, 1296.3-1296.4, 2304.3-2304.4, 3456.3-3456.4, 5760.3-5760.4, 10368.3-10368.4. For convenience or technical reasons many existing beacons on these bands are presently outside the recommended ranges.

The Memphis area beacon tour begins with some acknowledgments. Paul Wilson W4HHK, operated beacons on 50, 432 and 1296 MHz for many years and continues to maintain the unique solar powered intermittent W4UDQ beacon located near Linden, Tennessee. Paul turned over 50 and 432 MHz to me (1296 may continue operating from Collierville). I appreciate the W4HHK inspiration, W4RFR keyer design and equipment, N4HKS, K4RDK and N4VSD site logistics, KB4LJV programming, N4ZRW spousal support and the North Texas Microwave Society technical incentive.

The Grid EM55 (Memphis, TN) Beacon Status table details operational and developmental beacons for each band. All of the continuous Memphis area beacons operate using the N4MW/B callsign except for N4ZRW/B, an experimental multiple power level system. Commercial and military surplus components plus some kit and home-brew construction make up most of the beacon system. The heart of the system is the keyer, which uses a custom programmed memory chip to produce a constantly repeating CW message The keyer uses solid-state keying circuitry (no relays) to reliably key all transmitters simultaneously. Common power supplies power different transmitters. All antennas radiate horizontal polarization and are approximately 60 meters above ground with minimal feed line length.

The ten meter beacon employs a commercial low band FM paging transmitter solid state exciter. Modifications simplify the oscillator circuit and provide carrier keying. Running 8 watts to a dipole, this beacon is heard all over the US as well as Europe and Japan.

Six meters uses a GE FM exciter board to a Tempo amplifier and dipole antenna favoring east/west. Many reports are received from all over the US. A Bahamian station tells me that this beacon is the most consistently heard in the islands!

Two meters uses an FM exciter board from RF Communications. Very little modification is necessary to disable the audio modulation and to provide CW keying. The antenna is a "squalo" (a dipole warped into

Continued on Page 50

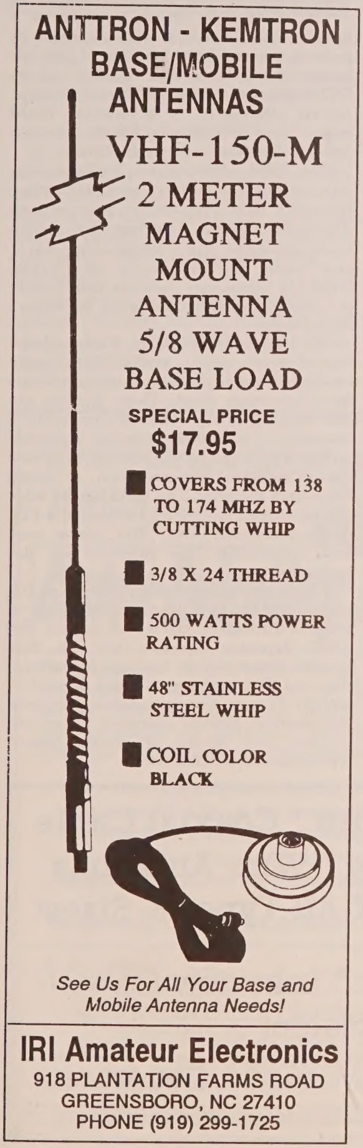
Grid EM55 (Memphis, TN) Beacon Status - January 1993

Frequency (MHz)	28.250	50.070	144.280	144.2975	222.055	432.395	902.285	1296.280	2304.215	3456.040	5760.040
Callsign	N4MW	N4MW	N4MW	N4ZRW	N4MW	N4MW	N4MW	N4MW	N4MW	N4MW	N4MW
Latitude	35.1	35.1	35.1	35.3	35.1	35.1	35.1	35.1	35.1	35.1	35.1
Longitude	90	90	90	89.9	90	90	90	90	90	90	90
Status	Active	Active	Active	Active	Active	Active	Active	Planned	Active	Active	Active
Mode	CW	CW	CW	CW	CW	CW	CW	CW	CW	CW	FSK
Power (watts)	8	15	4	4-0.0625	0.5	10	5	10	4	0.02	0.05
EIRP (dBW)	+10	+13	+5	+5 (max)	-4	+9	+12	+20	+11	-10	-7
Antenna Type	dipole	dipole	squalo	monopole	squalo	wheel	Alford slot	Alford slot	Alford slot	Alford slot	WG slot
Polarization	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal	horizontal
Pattern	E/W	E/W	omni	N/S	omni	omni	omni	omni	omni	omni	omni
Height (m)	60	60	60	3	60		60		60	60	60

Notes: Operation is continuous subject to infrequent power outages and brief control shutdown.
Reception reports may be sent via NTS, packet (N4MW@W4BS) or mailed to:
Band opening alerts: Dave N4MW or Cissy N4ZRW (901) 382-4919
N4MW/N4ZRW operate all bands through 5760 MHz

Dave Meier N4MW
3205 Covington Pike
Memphis, TN 38128

Suggestions: Observe beacons regularly, including monitoring of other services such as UHF television and TACAN. Note frequencies, beam headings and strengths. Changes may indicate unusual propagation or system performance changes. When you hear beacon signals which are not normally receivable, get on the air and make some noise. You can call on the telephone if you need a contact or if you feel a band opening alert is warranted. Experience has shown that a directional antenna and higher power will allow contacts before the beacons are detectable at distance, so do not wait. An alert to N4MW allows rapid establishment of an attended temporary beacon using higher power and directional antenna from the home QTH. Also, attended beacon operation or contact schedules can be arranged to increase the probability of catching enhanced propagation. We should actively minimize the "dead band syndrome" (everyone listening at once) by transmitting sometimes. Beacons help but should not be depended upon as ultimate "go/no go" indicators.



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Virginia Packet News

-by Lee McDaniel, WB4QOJ

■ 9600 Baud and 9090 MHz

Several groups in the Southwest part of Virginia are working on installing, the first 9600 baud on 900 MHz from that area to Richmond.

It was a consensus of all TDG members that this was a good long rande and justified undertaking. Some of the problems will exist, including no funding, but soliciting is planned to make the system a reality. N4SD, WA4YSE and N4QWJ can supply information about the project.

■ Eastern Shore Activity

The Eastern Shore has reacquired the equipment for ESx node that was stolen last year. An additional ESx node is planned as soon as a secure site is found. There are discussions for Node SBY changing frequencies. This would dramatically effect the movement of traffic north via the Eastern shore as well as cut off some of the users in southern Maryland. Further action and information is pending. For information contact, WA4TVS and NK3T.

■ WB0TAX-2 (TOA)

Look for WB0TAX-2 (TOA) to be off the air for about 10 days in the near future. The location of the system is soon to be remodeled. TOA is the only link to Richmond and West. W4NTG has information.

■ DX Cluster

Activity for the DX Cluster seems to be continually on the rise. At the moment a 440 link to Richmnond and beyond is in the process of being completed, making the cluster a very workable system for the area DXers. The K4UMI-5 (LRC) has replaced his radio and and changed frequency. Look for significant improvements in the near future. (WA4OHX for info)

TCP/IP

The same group of Amateurs who working on the 900 MHz. system are also building a nice packet stack atop one of the higher structures in Portsmouth. Equipment furnished by TDG membership will add 220 MHz to the system. The addition of this node will assist in the route to Richmond until 9600 baud and 900 MHz is up and operational. Contact N4SD, WA4YSE or N4QWJ.

■ Virginia Packet Radio Association (VPRA)

We were advised by WA4OHX, that the VPRA is still alive and functioning on a limited scall. The VPRA reportedly will change their name to Virginia Digital Group (VDG). This will more clearly reflect the organizations overall function to represent all digital operation. For information contact Jerry, WA4OHX.

■ WXLINK

WXLINK has been upgraded recently to include automatic SKYWARN warnings. The system may be accessed I@ SKYWARN on your local BBS for up-to-date weather information. Contact N4SD or N4JSP.

Other Virginia News

There is a new 2M to 6M link operating in the Lynchburg area. On 2M, the input is 146.49, and on 6M, there are 5 inputs, 2 on simplex and 3 on area 6M repeaters. The link is located east of Lynchburg on Oxford Furnace Hill. Power is adjustable on 2 and 6. This will give hams an opportunity to operat 6M who have never had a chance. Carl, W4KCS.

*****

Several Virginia hams have worked hard to work and confirm DX countries. The following are Top SSB (Phone) operators with all 323 countries confirmed.

N4VG - Clay Partin, Roanoke
W4DR - John Eshleman, Midlothian
W4FRU - John Prrott, Suffolk
W4FTV - Dusty Rhodes, Lynchburg
W4PDL - Al Dyson, Salem (Silent Key)
WA4MMO - Dean Glace, Chesapeake
N4MM - John Kanode, Boyce

*****

In Roanoke, The Blue Ridge Video and Digital Society is offering an information service on the 145.21 Poor Mt. repeater on Saturdays at 1700 local time. The one hour show, produced in New York state on the "Let's Talk Radio Network." The show, "This Week in Amateur Radio" is a well produced 1 hour weekly Ham radio information NET covering all aspects of the hobby. It is live via Satellite on Spacenet 3. BVDS invites you to listen in. Your repeater can carry it, by linking into the WB4QOJ 145.21 repeater. Let us know if you can, and we will pass along your repeater call into the Community Video Assocatiates. Its free and open to all.

****

Thats all the news for now from Virginia. Write, call or send us your information for the August issue. Lee WB4QOJ, P.O. Box 7873 Roanoke, Va 24019 (703) 563-4705. Packet WB4QOJ @N4ZKF VA.USA.NA.

Beacons - Discussion

Continued from Page 49

a square loop shape).

The 222 MHz transmitter is a GLB kit transmitter from some years ago, without the audio portion. The antenna is another squalo. Although fairly low in power, this beacon is still S9+20 at my QTH 15 kilometers away.

On 432 MHz, a hybrid amplifier module follows another GE board. A "Little Wheel" donated by the Mid-South Amateur Radio Association is to be the antenna. The 903 MHz beacon utilizes a Down East Microwave no-tune transverter kit and a Toshiba hybrid amplifier module. A low power sample of the two meter beacon output provides convenient transverter drive. The antenna is an Alford slot.

The 1296 MHz design consists of a no-tune board and a slot antenna. At present, an auxiliary function of the collocated 1292 MHz FM repeater allows DTMF command on or off for all beacons. As an alternative, a transverter board might later provide simultaneous beacon transmission and control reception.

The 2304 MHz beacon utilizes components from a military surplus tactical telemetry link. The output goes into an Alford slot antenna. At present the oscillator is not stable and I intend to replace it and move the frequency up. Texan WB5LUA sometimes receives this beacon at a distance of 680 kilometers, far beyond line-of-sight.

On 3456 and 5760 MHz, I take advantage of recent surplus availability of easily configured but highly stable signal sources from Frequency West. These sources are free running cavity oscillators locked to a harmonic of a crystal controlled reference oscillator. Output is in the 50 milliwatt range, sufficient for reception at many kilometers distance. The 3456 beacon adds CW on and off keying by addition of a PIN diode modulator. The 5760 source uses FSK modulation. The antennas are slot radiators.

I hope you enjoyed the lecture and the tour. For a reasonably complete listing of beacons throughout the world, consult The ARRL Repeater Directory, but note that beacons come and go and are not always reported. The best way to keep abreast of activity in your area is to actually operate and observe. Beacon operators appreciate hearing your reports of distant beacon transmissions or other uses.

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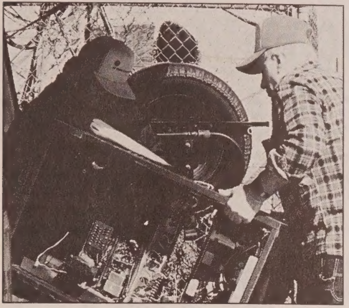
Rutherford County Repeater Back On Cherry Mountain NC



Rod Sheppardson, KC4YOQ and Bob Hill, WA4BKU strain to unload the Rutherford County 146.67 repeater from the truck. Installation went well. *-Photo ctsy N4SUZ.*

-by Mike Chaps, N4SUZ

It was a clear and cool Saturday morning in February when one of the local Rutherfordton repeaters came alive and the melodious voice of N4EIY, Robert Falls came on the air and said "I'm buying breakfast at Shoney's."

Needless to say, the following responded - Robert Smith, N4UFO, Rod Sheppardson, KC4YOQ and Mike Chapa, N4USZ.

Over breakfast and some discussion, if was decided that it was time to place the 146.67 machine on the air. So the group left and went their way to pick up the required items, along with Bob Hill, WA4BKU who had the repeater at his home.

The group met on Cherry Mountain, which is in Rutherford County, close to Forest City. After mapping out plans, and individual tasks, the group set out to install an antenna and the repeater.

Robert Smith, N4VFO holds the new Rutherford County repeater antenna while Mike Chapa, N4SUZ twists the bolts on the clamps. *-Photo supplied by N4SUZ.*

A couple of hours later, the repeater was up and running. This is an open repeater and all are invited to use it any time they are in the area. The coverage to the East is to King's Mt., West toward Asheville and South toward Greenville, SC.

Rutherford County now has four repeaters in operation. On 2-meters, 147.24, tone access of 123, and 146.67 which is open. On 70 cm, the 443.30, tone access of 123, and the 444.40 which is open access.

Notice to Journal Advertisers

The SERA Repeater Journal has raised its advertising rates, effective with the next issue. This is the first increase required since 1987. Due to rising costs of printing, postage and circulation, the Publications Committee felt the move was necessary. The Journal previously has been subsidized by Membership fees. It is now felt that the Journal should pay more of its own way in the future.

The Journal Advertising Rate information is located on Page 23.

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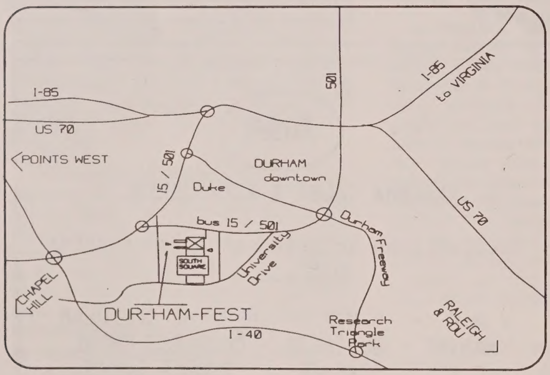
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2 Meter Band Openings: The Good, The Bad, The Ugly!

-by Gary Pearce, KN4AQ - Raleigh NC

Here they come. You can't stop them. One morning soon, you'll wake up, turn on your two-meter FM rig and find the world is turned on it's ear.

The first thing you might notice is that Pennsylvania station talking on the local repeater. Not a station FROM Pennsylvania... a station IN Pennsylvania. Or New Jersey. Then you dial around the band. Hey, who supercharged my radio!? There's a signal on almost every frequency! I never heard that Charlotte repeater from my driveway before. Listen to those guys in Virginia -- full quieting!

What happened? A Band Opening -- that's what happened. Oh, there've been a few piddly little ones over the winter, but those of you with new licenses who just got on the air ain't heard nothing yet. Not until you hear a full-fledged two-meter band opening!

THE GOOD: Springtime in North Carolina, and a young (or old) VHF ham's fancy turns to thoughts of DX. Overnight the cool air pools by the ground and the warm air rises. By early morning, nearly every day, we have a phenomenon known as "temperature inversion," with a layer of warm air on top of a layer of cool. For reasons too long to explain here (which is another way of saying "for reasons I don't know"), two-meter signals change their behavior during temperature inversions. Instead of making a beeline to the next galaxy (where there are very few aliens listening on HTs), they bend along the surface of the Earth, extending your range (and your repeater's range) up to hundreds of miles.

On an inversion morning you can hear forever, almost. And you can talk forever, too, if you can get a word in edgewise. It'll be busy. Don't just hang around the local repeater. Stretch your own wings. Listen on the channels with no local activity. See what you can hear (a Repeater Directory will help). And see where you can talk. And don't forget simplex, especially on a weekend. If you've been around a while and the hobby has lost some of it's sparkle, you'll feel that new-ham thrill again.

THE BAD: Bad!? This is GREAT! What could be bad about this! Listen... I just talked through a repeater in NEW YORK CITY (a town famous for their authentic picante sauce). I gotta get on .64 and tell Rick! (Any Rick will do.) ....Geez, .64 is busy. And, hey, those guys aren't even talking to anybody around Raleigh -- I don't think they're even using this repeater! Yeah, no doubt about it, they're both in Winston-Salem. Hey, why don't you lower your power, you lids?! I think you're beginning to understand.

You see, the two-meter band plan and frequency coordination are designed around "normal" band conditions. A better way to say this might be "dead" band conditions, since in some parts of the year, "open" conditions are "normal".

In SERA Territory Repeaters are coordinated with about 100 to 150 miles between them, which is usually far enough apart that one repeater's users won't be keying up the other repeater, unless they're running too much power/antenna. But when the band is open, all bets are off on coordination. And there's no other way to do it.

If repeaters were coordinated to prevent interference during band openings, there might be one .64 repeater up around New York, then ours here in Raleigh, and we might be able to squeeze one in down by Miami.

Continued on Page 54

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Band Openings: Good, Bad, Ugly!

Continued from Page 53

THE UGLY: The ugly part is that a lot of hams don't know what you've just learned -- or don't care. Either way, they've got signal flying through the air to who-knows-where, lot's more than they need. They're talking through their local repeater, which is so strong in their receivers that they have no idea they're also getting into another repeater North of them, and yet a third Southeast. And when the band's open, even just a little, it doesn't take that much power or antenna to do it.

Five watts to a mobile whip can get you to the coast or the mountains when conditions are right. Or they're working DX like crazy, monopolizing a channel and tying up 5 repeaters to do it.

SO WHAT DO YOU DO? Do you sit on your hands (so you can't push-to-talk) when the band's open? Take up gardening (it is spring)? Buy a kW amp so you can be heard no matter what? Hmmm, that last one's an intriguing option. But mostly, you learn how that band opening works, and how you fit in. Do you want to try DX? Listen, and see what's coming in. Check the directory, and see where that distant repeater is from.

See if you can learn what other repeaters are on the same frequency. Then key down and give somebody a call, and listen to what you hear when you let go of the mic. If the band's really open, and you've got much signal at all, you might hear quite a mish-mash of hetrodynes -- you've keyed up several repeaters.

A beam, or other directional antenna, will give you two advantages: more signal where you want to talk, and less where you don't want to talk (this would be hard to do while mobile). Be sensitive to where your signal is going, but have your share of fun, too. Want to stay local? Keep your power and antenna low.

Since the local repeater is so strong, you won't know if you're also getting into another one across the state line. If handie-talkies can use the repeater all over town, you probably don't need 45 watts into your 5/8 wave mobile antenna to get in. And again, remember simplex. On a repeater, it's the repeater that's doing most of the work. On simplex, it YOU (and the guy you're talking to). And if you REALLY want to get fancy, get a multi-mode rig and try SSB. Now there's a mode made for DX!

Band Openings. Coming soon to a two-meter (or 220, or 440) radio near you!

Around The Area! (WV)

Our WV Journal Correspondant, Ted Wolfe, WD4KHL leads the way during a tour of Charleston's (WV) Metro 911 Operations Center. -Photo by Sam W8NSD

Just Out! The '93-94 ARRL Repeater Directory. This photo was taken in January, when David Ward, KA4LVO, SERA Database Manager presented the 8-State updated SERA database for the ARRL Directory to Jay Mabry, Editor. SERA President, Dave Shiplett, AC4MU looks on. (SERA File Photo)

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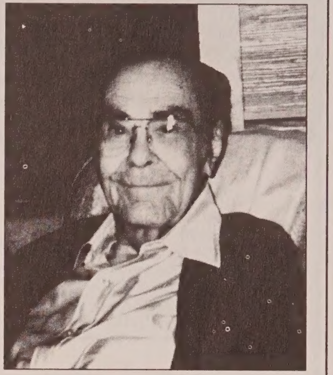
Gene Banta - Silent Key



H.E. (Gene) Banta, became a Silent Key at 88 years of age. He earned a PhD Degree in Physics at Rice University in 1932, and worked as a Geo-physicist in Texas until he moved to Oak Ridge, TN in 1950. He worked at the National Laboratories as a Neutron Physicist and a Professor at the Oak Ridge Associated Universities until he retired in 1969. Gene authored and co-authored 32 scientific papers during his career while at Oak Ridge.

Not only did Gene have an outstanding professional career, he excelled as a Radio Amateur as well. Gene was first licensed as W5NQA in Houston, TX in 1946, and served as EC in Houston.

When he moved to Oak Ridge in 1950, his callsign was changed to W4GSI. He always maintained capabilities to use most of the Amateur bands, which included from 160 meters to 1296 MHz. His home was at an elevation of 2800 feet.

Gene was appointed Official Bulletin Station in 1952 and had served as OBS with distinction continuously until his health forced him to cease on-the-air bulletin dissemination in August of 1992. Due to his faithful service over the past 40 years, he was awarded the Certificate of Merit and placed on the status of Official Bulletin Station Emeritus.

All of us who knew Gene, thank him for the influence he had on our radio Amateur life, and all that he did to advance the cause of Amateur Radio throughout the Tennessee Section. *(O.D. Keaton, WA4GLS, SM, Tennessee Section.)*

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RJ-5-93

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OCT 2 & 3 1993

A R R L

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The SERA Repeater Journal

VE/VEC EXAMINATION SCHEDULE

The VEC/VE Exam schedule is published Free as a public service of SERA. Schedules are supplied by individual VEC/VE teams. For quarterly changes, or additions, write the Repeater Journal Editor. SERA cannot assume any responsiblity for erronious or outdated listings other than typographical errors.

Arkansas

West Memphis WCARS-VEC
Walk-ins 2nd Sat. each month at 9:00 a.m. at the Rosewood United Meth. Ch. Sked: Jun. 12, Jul 10, Aug. 14, Sep. 11, Oct. 9, Nov. 13, Dec. 22. Call: Gene Bagley, AB5BL, (501) 739-4029, or Rev. Richard Gregory, AB4CH, (501) 735-4060.

Georgia

Augusta, ARRL-VEC
Walk-in exams 2nd Saturday, even months at Fort Gordon, Bldg. 20301 at 9:00 a.m. Sked: Jun. 12, Aug. 14, Oct. 9, Dec. 11. Contact: Ace Norton, NA4I (706) 798-5060.

Augusta WCARS-VEC
Walk-in exams on 2nd Saturday Odd months at Sue Reynolds Community Center. Code at 10 a.m. Written 11 a.m. Sked: Jul. 10, Sep. 11 and Nov. 13. Contact Jim Abercrombie, N4JA, (404) 790-7802.

(Metro Atlanta Area Examinations)

Lawrenceville W5YI-VEC
Walk-in exams 1st Sunday monthly at 2:00 p.m. at Jackson EMC, 461 Swanson Rd., Lawrenceville. Contact Duane Reynolds, WB2YAD, 962-9582.

Peachtree City CA-VEC
Walk-in exams 1st Saturdays at 9:00 a.m. at Peachtree City - City Hall. Take exit 12 off I-85. Contact Mike Murphy, KB4KZY, 487-7494.

Roswell CA-VEC
Exams 1st Monday of each month at 7:00 p.m. at the St. Ann Catholic Church, 4905 Roswell Rd., Marietta. For info, contact: Delaine McCarthy, KM4FV 993-9758.

Stone Mountain CA-VEC
Walk-ins 2nd Saturday of each month, at 8:30 a.m. at Stone Mt. Methodist Church, Contact Hal Martin, KI4RD, 469-6430.

Southern Tech CA-VEC
Walk-ins 3rd Saturday each month. 9:00 a.m., Southern Tech, Rm 4310, Academic Bldg.. Call Hal Martin, KI4RD, 469-6430.

DeKalb County CA-VEC
Walk-ins 4th Thurs. at 7:00 p.m. at DeKalb Co. Police, E. Precinct, Lithonia. Call Harvey Pearson, WB4PHF, 972-5061.

North Atlanta ARRL-VEC
Walk-ins 4th Sunday monthly, 2:30 p.m. at Church of the Atonement, Highpoint Rd. Call Neil Foster, KC4MJ, 449-3340.

Dalton WCARS-VEC
Pre-Reg. exams Saturday even months at Unity Baptist Church at 3:00 p.m. Sked: Jun. 26, Aug. 28, Oct. 30, Dec. 25?? Contact Bert L. Coker, N4BZJ, (706) 259-5625 or Harold W. Jones, N4OTC, (706) 673-2291.

Indiana

New Albany, WCARS-VEC
Walk-ins 3rd Sat.of even months 10 a.m-2 p.m. at Ind. Univ. Sked: Jun. 19, Aug. 21, Oct. 16, Dec. 18. Call Dick Truax, K8GVU, 246-6377 or "Mac" McCrory, NM9A, 944-6661.

Kentucky

Hazard WCARS-VEC
Walk-ins at Ray G. Eversole School. For info contact John Farler, K4AVX, 109 Hall St. Hazard, Ky 41701. Ph. 436-5354.

Louisville WCARS-VEC
Walk-ins 3rd Sat. odd months 10 a.m.-2 p.m. at Government Center, Sked: May 15, Jul. 17, (Sept. 25-26 Hamfest), Nov. 20. Contact Otis Herron AA4HJ, (502) 969-7332. or Bob Happell, N4GLX, (502) 425-5260.

Middlesboro WCARS-VEC
Walk-ins 2nd Saturdays odd months at Middlesboro Library. Jul. 10, Sep. 11, Nov. 13. Call: Andrew A. Pitt, WB8WEZ, (606) 248-0046 or James Dyke, KZ8A (615) 869-4453.

Mississippi

Gulfport ARRL-W5YI VEC
Exams held at Harrison Cty. Courthouse in CD conf. room at 8:00 a.m. Call: Stan Hecker, AA4SP 875-9341,d 875-0222, n.

Ocean Springs ARRL-W5YI VEC
Exams at 7:00 p.m. at Ocean Springs Library in meeting room. Pre-reg req, limited walk-ins accepted. Contact Stan Hecker, AA4SP (601) 875-9341 day and 875-0222 nights.

North Carolina

Asheboro VE Team
Exams qtrly at Belfour Baptist Church, 1642 N. Fayetteville St. and at other times warranting an exam session. Contact: Dwight Ayers, N4ZRT, P.O. Box 246, Cedar Falls, N.C. 27230. (919) 629-5516.

Asheville WCARS-VEC
Walk-in exams at 9:00 a.m. at the Health and Social Services Bldg. 25. Sked: Jul. 24 & 25 (Hamfest) and Oct. 23. Contact Norman G. Harrill N4NH, (704) 253-1192.

Asheville WCARS-VEC
Walk-in exams 2:00 p.m. at the Elm Bldg., Rm. 134 of AB Tech. Sked: May 16, & Nov. 21. Contact Mary Dull AA2AB, (704) 891-5481, or Don Lovelace, W4TMT, (704) 765-5311.

Charlotte ARRL-VEC
Exams quarterly in May, August & Nov. Call: Rob Rochelle, WA4DAZ 845-3099 or Mary Hunt, KA4EXP 845-9429

Charlotte Charlotte-VEC
Monthly walk-in exams at 9:00 a.m. Saturdays at Gaston Cty library, Gastonia. Contact Charlotte VEC, (704) 596-2168.

Durham
Exams 2nd Saturday of odd months. Please pre-reg. by mail with SASE to KY4Y, 120 Radcliff Circle, Durham, NC 27713.

Greensboro W5YI-VEC
Walk-in exams 3rd Thursday of each month, at the Trotter Center on Vandalia Rd., Reg 6:30 p.m. For info: WB4CCT, WB4WOR, N4GGD, N4BYU or W3GRG on 146.76 repeater, or call Real Talk (919) 299-2525, Prompt 0076.

Hendersonville W5YI-VEC
Blue Ridge Chap. QCWA team has Walk-in exams at Blue Ridge C.C. 2:00 p.m. on Jun. 6, Sep. 12, Dec. 5. Walk-ins welcome, reservation req. Contact W2YTO at 891-4359.

Fayetteville CFARS ARRL-VEC
Walk-in exams 2nd Sat. of odd months at Methodist College in Science Bldg. Regis. 9:00 a.m., testing 9:30. Contact CVE Fred New KN4SS at (919) 497-6589.

High Point TEARC-VEC
Exams occasional basis. Call Jim Williamson, NQ4T at (919) 841-7576 for more details. Sessions avaiable for 5 or more.

Kernersville TEARC-VEC
Exams 1st Sat. monthly, 9:00 a.m. at Kernersville Public Library. Call Jim Williamson, NQ4T at (919) 841-7576.

Leicester WCARS-VEC
Walk-in exams 2nd Saturdays each quarter. at 9:00 a.m. at Leicester VFD on Hwy. 63, (Asheville). Sked: Jun. 12, Sep. 11, Dec. 11. Call: Larry E. York, WB4PLA, (704) 683-1400.

Marion WCARS-VEC
Walk-ins at Asheville Federal Bank, Main St. Sked: Jun. 12, Aug. 14, Nov. 13. Call: Cecil D. Potter, WB4UCF, 724-4007.

New Bern WCARS-VEC
Walk-in exams held at New Bern High School at 9:00 a.m.. Sked: Jul. 5. (Aug.-Dec. - coming later) Contact: Andy Griffith, W4ULD, (919) 726-5924 or (919) 247-0967.

Raleigh
Exams 1st Wednesday of even months. Pre-register by mail with SASE to AA4MY, 220 Carriage Trail, Raleigh, NC 27614.

Rocky Mount ARRL-VEC
Tar River ARC conducts walk-in exams 9:00 a.m. at Rocky Mount Childrens Museum, Sunset Park. Sked: May 22, Jul. 24, Sep. 25, Nov. 27. Call: Bill Thomas, WF2G, 442-6131.

Rutherford County WCARS-VEC
Exams at Isothermal Col. in Spindale 3rd Saturday, 1st Month of quarter. Sked: July 17, Oct. 17. Call: A.B. Brackett, KO4BJ, 245-6344 or F. Bruce Tessinear, KD4OJ, 657-5464.

Salisbury W5YI-VEC
Exams 2nd Sunday each month, 1:00 p.m. Rowan County Public Library. Call: Isabelle Ledford, AB4UX, (704) 284-2414.

Smithfield (ARRL-VEC)
Triangle East ARA 3rd Sat. monthly. Write TEARA VE, POB 255, Smithfield, NC 27577 or call Peter Hulth, N4SXG, 934-8927 or Dave Hockaday, WB4IUY, 291-8451

Spruce Pine WCARS-VEC
Exams at Burnsville Public Library at 9:00 a.m. Sked: May 15, Aug. 21, Nov. 13. Contact: David McCarty, KK4PW, (704) 675-9044 or David L. Gillespie, WA4LLR, (704) 675-9942.

Tarboro ARRL/VEC
Tar River ARC exams every 2 months at Heritage Hospital at 9:00 a.m. Contact Bill Thomas WF2G, (919) 442-6131

Wilson
Pre-registration exams 2nd Sat.qtrly, at Wilson County Library Conf. room at 9:00 a.m. Sked: May 15, Aug. 21, Nov. 20. Call Tommy Evans, NE4J at 291-1738 nights, 237-1898 days.

Yadkinville VE Team
Walk-in exams by Bear Creek ARC 2nd Saturday of each month at the Yadkinville Elementary School on Rt. 601 at 10:00 a.m. Call Steve Hutchens, N4DEY at (919) 961-8741.

South Carolina

Charleston WCARS-VEC & W5YI VEC
Walk-in Exams 3rd Saturday each month at 9:00 a.m. at Trident Tech College Sked: May 15, June 19. Jul. 17, Sep. 18, Nov. 20. If holidays, testing on the 2nd Saturday. Contact: Ed Frank, 871-4368. (W5YI) and Pat Foster, AC4IH, 553-3871 or Werner E. Dolder, AA4IX, 873-9465 (WCARS)

Columbia, WCARS-VEC
Walk-in exams 3rd Sat. even months, at the Red Cross Bldg., Bull Street and Harden Ext., 8:30 a.m. Sked: Jun. 19, Aug. 21, Oct. 16, Dec. 18. Call Ray Rogers, N4WR, 345-3373.

Greenville WCARS-VEC
Walk-in Exams 1st Saturday odd months at 8:30 a.m. at O'Neal Engr. Bldg. 850 S. Pleasantburg Dr. Sked: Jul. 10, Sep. 11, Nov. 6. Contact John Chism, ND4N, (803) 288-0136.

Lancaster W5YI-VEC
Novice thru Extra. Pre-Regis, or Walkins. 9:30 a.m. USC, Main Bldg. Talk-in: 10-70. Call Grady Robinson, 283-8298.

Spartanburg WCARS-VEC
Walk-ins 2nd Tuesday even months 7:00 at ARC on Garner Road. Call: Pete Theiler, KI4KN, 585-4919 (n) 578-5566 (d)

Sumter WCARS-VEC
Walk-in exams 3rd Saturday 8:30 AM odd months at the Abundant Faith Church on Hwy. 521. Sked: May 15, Jul. 17, Sep. 18, Nov. 20. Call Dan Mask WB5SGH, (803) 775-9106.

Tennessee

Blount County, Maryville WCARS-VEC
Walk-in exams 2nd Monday even months at 7:00 P.M. at St. Andrews Church Hall, Sked: Jun. 14, Aug. 9, Oct. 11 and Dec. 13. Contact: Carrol Peabody, W4PCA, (615) 982-5839.

Carter County WCARS-VEC
4th Friday odd months 7:00 p.m., Carter Cty. Airport Elizabethton. Pre-reg. is rqr day before tests. NO walk-ins. Sked: May 21, Jul. 23, Sep. 24,Nov. 19. Call Joe Hopkins, K4BKI, 543-4022 or Jon Christiansen, AB4NN, 543-7155.

Chattanooga CARC ARRL-VEC
Pre-Regis. exams monthly except July and Nov., at ARC bldg. McCallie Ave. at 6 p.m. Mail FCC 610 form, copy of lic. check to CARC Amateur Exam, P.O. Box 23211, Chattanooga, Tn 37422. to arrive Wed. before exam..

Chattanooga WCARS-VEC
Walk-in exams first Monday odd months at Walker County (Ga.) Civic Center, Hwy. 27, Rock Springs, Ga. at 7:00 p.m.

VE Exam Schedule Continued Next Page

Have a Fun Filled Family Weekend
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Hamfest Chattanooga
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Chattanooga, TN 37404

VE/VEC EXAMINATIONS

CONTINUED FROM PREVIOUS PAGE

Sked: Jul. 5, Sep. 6 and Nov. 1. Contact: Alan Painter, WA4QCH, or Dale Harwood, N4VFF, (404) 937.5680.

Fentress County WCARS-VEC
Walk-in exams 3rd Thur, 1st month of qtr, 7:00 p.m. at First Baptist Church. Sked: Jul. 15, Oct. 21.Call: Mike Ledbetter, AB4BX, 879-8626 or Steve Qualls, KJ4HT, 879-7517.

Gallatin WCARS-VEC
Exams held at hamfest. Oct. 2 at 11:00 am. Pre-registration only. Contact: Ronnie L. Gilley, KA4LUG (615) 452-0883 or Jerry Goodchild, K4DZR, (615) 824-7699.

Greeneville WCARS-VEC
Walk-in exams 4th Saturday odd months at Roby Adult Center on College St. Sked: May 22, Sep. 25 and Nov. 27. Contact: Jack Creed, K4EPC, (615) 638-7056.

Henry County WCARS-VEC
Walk-ins every 6 weeks at 9:00 a.m. at Henry County HS, Paris. Jun. 12, Jul. 24, Sep. 4, Oct. 16, Nov. 27. Call Mackie Gallimore AA4YF, 247-5489 or Les Merrell, KQ4F, 642-5966.

Jasper WCARS-VEC
Pre-Reg. req., some walk-in (exams limited), 2nd Sunday at Jasper Public Library 1:00 p.m. Sked: Jun. 13, Jul. 11, Aug. 8, Sep. 12, Oct. 10, Nov. 14, Dec. 12. Call Charles Wooten, KD4XX, 942-5116 or Wallace S. Brown, KD4XV, 942-2836.

Johnson City WCARS-VEC
Exams 3rd Saturday even months at 10 a.m. at ETSU, Room 223. Reg. 1/2 hr. prior. Sked: Jun. 19, Aug. 21, Dec. 18. Contact Charles Hensley, AC4QF, 743-5144 (h), 926-1171 ext. 7807 (w). or C.V. Jayne, Jr. W4NHT, (615) 282-5822.

Knoxville WCARS-VEC
Pre-Reg. til 9:30 a.m. Code 10 a.m., written 11 a.m. 3rd Saturday of month. Upgrades only. Novice testing on request. Pellissippi State Tech. Room B-129. Sked: May 15, Jun 5, Knoxville Hamfest, Jun. 19, Jul. 17, Aug. 21*, Sep. 18*, Oct. 16*, Nov. 20*, Dec. 18*. (*=Tentative dates. Call: Ray Adams, N4BAQ, 688-7771. Alt. Rich Slover, ND4F, 539-4821.

Loudon County, Loudon WCARS-VEC
Walk-in exams 4th Saturday even months, at Third National Bank on U.S. 321 E. (321 is Exit 81 on I-75, then East to Bank) Sked: Contact: Bob Gray, KE4SK (615) 458-6115.

McMinn County WCARS-VEC
Walk-in Exams 2nd Monday 8:00 p.m. odd Month, at Athens Municipal Building Council Chambers. Sked: Jul. 12, Sep. 13 and Nov. 8. Contact: Evan Ray, WA4PNI (615) 263-9300.

Memphis WCARS-VEC
Walk-in exams 3rd and 4th Sat. of month at 9:00 a.m., Central Church on Winchester Road. Sked: May 15 & 22, Jun. 12 & 19, Jul. 17 & 24, Aug. 21 & 28, Sep. 18 & 25, Oct. 16 & 23 Nov 20 & 27 Dec 18 Contact: Win Guinn W2GLJ, (901) 754-4552 or Nita Wofford, N4DON, or Stan & Mary Moore, AC4CQ & AC4GF, (901) 795-5923.

Roane County WCARS-VEC
Walk-in exams 2nd Sat. even months, Pond Grove School, Rockwood. Jun. 12, Aug. 14, Oct. 9, Dec. 11. Call Richard Spille, AA4KS, 354-4281, or Bill Smelcer, KA4AAD, 354-1010.

Virginia

Bedford ARRL-VEC
Walk-ins 2nd Sunday, 2:00 p.m. at Liberty Lake Park Admin. Building. Info, Call Bob Treacy, W2QZY (703) 297-5351

Danville W5YI-VEC
Walk-in Exams last Tuesday of month at Danville Community College, Hill Building. Registration starts at 6:30 p.m. Contact Richard Marshall, WB4CCT, (804) 793-0772.

Roanoke WCARS-VEC
Upgrades only. Novice testing on request. Walk-in on Sep. 25, Dec. 4, at Hollins College. Contact Fred L. Horton, KZ4Y, (703) 366-6266. or Ben Giavaden, N4BG, (704) 344-7000.

Norfolk, Va. Beach, Hampton Roads, Portsmouth, Chesapeake, Williamsburg.
All exams: Walk-ins are ok, but contact person would like to know in advance. See individual exams for contact person.

Southeastern Virginia Schedule

Chesapeake DX Assn (ARRL/VEC) Contact: Bill Verebely, KC4YX at 424-4764. Sked: Jul. 10.

Hampton Roads Radio Assn.. (W5YI/VEC) contact Bill Runyon, N4BDH at 487-8611. Sked: Aug. 21, & Nov. 20.

Portsmouth ARC. (ARRL/VEC). Contact Art Thiemens, AA4AT at 484-2857. Sked: Nov. 6.

Virginia Beach ARC (ARRL/VEC) contact Ed Robinson, WD4GOY, 468-0866. Sked: Jun. 5, & Dec. 4.

Williamsburg ARC (ARRL/VEC) Contact Andrew Swanson, WJ4X at 253-2811. All exams walk-ins Sked: Sep. 11.

Virginia Beach Hamfest Oct. 3 - The South Peninsula ARC will conduct ARRL/VEC WALK-IN exams Sunday only at the Virginia Beach Hamfest-Computer Show. Call Ed Brummer W4RTZ 898-8031. Exams are Walk-in only

West Virginia

Charleston, W5YI-VEC
The Kanawha Valley group gives Novice thru Extra exams, 9:00 a.m. 3rd Sat. of month, at Holy Trinity Catholic Church in Nitro. Walk-ins ok. Talk-in on 40-00 St. Albans repeater.

Huntington, TARA W5YI-VEC
Walk-in exams by the Tri-State ARA VE Team at Our Lady of Fatima Church, 545 Norway Ave. Check-in by 9:15 a.m., exams at 10 a.m. Call: Jim Baker, K8KVX, (304) 736-6542.

Nitro, W5YI-VEC
Walk-in exams (register at site) are held at the Holy Trinity Catholic Church. Registration begins at 9:00 a.m..Contact: Jimmie Hewlett, WD8MKS, (304) 768-1142.

NOTE TO VEC/VEs
The Repeater Journal publishes at no charge brief exam schedules. The Journal assumes no responsibility for erroneous dates or information other than to publish corrected changes in future editions if timely. VEC/VE organizations are invited to use this free service. Send your exam schedules, updates or changes to the Editor. Deadline for the August Issue is July 1. See above format for information to submit.

Robert McNeil, W4MBD, presents a check for $500 to ENC President Doug Burt, WB4UOU, as a donation from the Kinston Hamfest. A similar amount was given to the fledgling 220 Repeater association. (foto by Gene Fegely)

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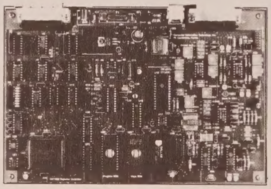

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X-2200A	144-6.0db/220-7.8db 11.5'	**169.95**
X-3200A	2m-6.0db/220-7.8db/440-8.0	**189.95**
CR-214S	146-3.0db/220-3.0db	**53.95**
CR-224A	146-5.0db/220mhz-6.0db	**81.95**
CR-320A	146-2.2db/220-3.8db/440-5.5	**74.95**
NR-140A	220 mobile antenna 4 db 37"	**49.95**
NR-72BNMO	146-2.2 db/440-2.2db 14"	**39.95**
NR-73BNMO	146-3.0 db/440-5.5db 34"	**54.95**
NR-770HNMO	146-3.0 db/440-5.5db	**54.95**
NR-770RNMO	146-3.0 db/440-5.5db	**54.95**
NR-770H	146-3.0 db/440-5.5db 39"	**47.95**
NR-770R	146-3.0 db/440-5.5db 39"	**47.95**
NR-770S	146/446 mhz dualband 17"	**42.95**
NR-790	146-4.5 db/440-7.2db 58"	**74.95**
SG-2000	2 mtr super gainer 5.2db 62"	**72.95**
SG-7200NMO	146-3.2db/440-5.7db	**77.95**
SG-7500	146-3.5db/440-6.0db 41"	**72.95**
SG-7900	146-4.5db/440-7.2db 62"	**97.95**
K-300M	deluxe gutter mount w/bnc	**71.95**
K-400M	trunk mount 16.5' coax	**71.95**
K-600M	trunk mount ADG(0-9) 16.5'	**57.95**
DP-SPM	premium mag mnt 13' coax	**39.95**
NMOUHF	adapter PO ant to NMO mt	**17.95**
D-130J	discone ant 25-1300mhz	**86.95**
MX-72H	2m/440 cm dup 2 PL259	**49.95**
MX-72N	2m/440cm dup PL259 & N	**49.95**
MX-72D	2m/440 cm dup 2 PL259	**49.95**
MX-72DN	2m/440cm dup PL259&N	**49.95**
MX-214	2m/220 duplexer 2 PL259	**59.95**
MX-324	2m/220/440 TRIPLEXER	**89.95**
MX-2000	6m /2 m /70cm triplexer	**79.95**
RH-77CA	2 mtr/70cm ht antenna 15"	**27.95**
DL-30A	dummy load 20cont/60int	**29.95**
CX-210A	coaxial antenna switch	**44.95**

CUSHCRAFT

A147-4	2 meter 4 element beam	**49.95**
A147-11	2 mtr 11 element beam 13db	**64.95**
A449-6	440-450mhz 6 element beam	**48.95**
A449-11	440-450mhz 11 element beam	**61.95**
124WB	144-148mhz 4 element beam	**59.95**
224WB	220-225mhz 4 element beam	**54.95**
13B2	144-148mhz13ele all mode	**109.95**
225WB	220-225mhz 15 element	**109.95**
A147VPK	A14711 stacking kit w/boom	**84.95**
22-SK	stacking harness/pwr div13B2	**74.95**
A-50-3S	3 element 6 meter beam	**83.95**
A-50-5S	5 element 6 meter beam	**139.95**
AR-2	ringo 2 meter 3.75db 1KW	**39.95**
AR-6	ringo 6 meter 3.75db 1KW	**57.95**
AR-10	ringo 10 meter 3.75db 1KW	**57.95**
AR-2/70	ringo 2 meter/70cm	**69.95**
ARX-2B	2 meter ringo ranger II 6db	**51.95**
ARX220B	220-225 mhz ringo ranger II	**51.95**
10-3CD	28 mhz 3 element beam	**169.95**
TEN-3	28 mhz 3 element beam	**109.95**
A-3S	20/15/10mtr 3 element 8 db	**349.95**
A743	7 & 10 mhz add on for A3S	**119.95**
A-4S	20/15/10mtr 3element8.9db	**419.95**
A744	7 & 10 mhz add on for A4S	**119.95**
AP8A	3.5/7/10/14/18/21/24/28 vert	**199.95**
APR18A	8 band radial kit for AP8	**49.95**
R5	10/12/15/17/20 mtr vert	**279.95**
R7	10/12/15/17/20/30/40mtr vert	**379.95**
AOP-1	complete Oscar ant package	**219.95**
PS4	rem polarity swch req 12vdc	**109.95**
LAC-2	coax lightning arrester	**12.95**
LAC-4	200w gas lightning arrestor	**36.95**
LAC-4H	2000w gas lightning arrester	**39.95**

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4063	RG-213/U better than RG-8	**0.49**
8612	rotor cable 2-16 & 6-18 8wire	**0.49**
9086	9913 type low loss 50 ohm	**0.55**
9091	RG-8X mini foam	**0.22**
6214	copperweld ant wire 16(7X22)	**0.12**

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249	1.8-170mhz swr/freq counter	**199.95**
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264	1.5kw dummy load 0-650 mhz	**59.95**
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407B	deluxe electronic keyer	**69.95**
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422BX	keyer for Bencher	**79.95**
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989	3kw versa tuner V	**309.95**
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1024	outdoor active antenna	**129.95**
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1796	1/2 w vert 40/20/15/10/6/2	**189.95**
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SERA Repeater Journal
Hamfest Calendar

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Corrected as of 4-22-93

MAY 1993

1-2 ...... 54th Hamfest At Anderson Cty Fairgrnds,GREENVILLE, SC
1-2 ...... Hamfest, BATON ROUGE, LA
9 ...... Hamfest, MEDINA, OH
15-16 ...... ARRL State Conv./Hamfest, BIRMINGHAM, AL
16 ...... Antietam RA Great Hagerstown Hamfest, HAGERSTOWN, MD
16 ...... TSRAC Hamfest, Computer Fair, WHEELING, WV
21-22-23 ...... Atlantic Division ARRL Conv./Hamfest, ROCHESTER, NY
22-23 ...... Andrsn, Hartwell, Toccoa RC Hamfest, SADDLERS CREEK ST. PK, SC
23 ...... Jackson Cty Hamfest, RIPLEY, WV
23 (Note New Date) ...... 32nd RVARC - Mayfest '93, (Salem Civic Cen) ROANOKE, VA
29 ...... 19th Annual Dur-Ham-Fest, DURHAM, NC
29-30 ...... Hamfest, GASTONIA, NC
30 ...... MD. FM Assn. Hamfest, (Howard Cty Fairgrnds), W. FRIENDSHIP, MD

JUNE 1993

5 ...... Azalea Coast ARC 1st Annual Seafest '93, WILMINGTON, NC
5 ...... Amateur Radio & Computer Fair, KNOXVILLE, TN
5 ...... Athens RC Annual Hamfest, ATHENS, GA
6 ...... Ole Virginia Hams - Hamfest, MANASSAS, VA
12 ...... Hamfest, WINSTON-SALEM, NC
13 ...... El Hasa Shrine Radio Unit Ham Swapfest, BOYD COUNTY, KY
19 ...... Hamfest & Computer Fair, BLUEFIELD, WV
19-20 ...... Albany ARC Hamfest, ALBANY, GA

JULY 1993

3-4 ...... West Va.State ARRL Conv/Hamfest, JACKSONS MILL, WV
9-10 ...... YLRL National Convention, WICHITA, KS
10 ...... TARC, Charleston II Summer HF & Computer Expo, CHARLESTON, SC
10 ...... NC Chapter TSRAC "Firecracker" Hamfest, SALISBURY, NC
11 ...... Summit ARAs Carrol Cty. Hamfest/Computer Show, WESTMINSTER, MD
17 ...... Mid-Summer Swapfest, CARY, NC
17-18 ...... SE ARRL Div. Conv/Hamfestival, ATLANTA, GA
24-25 ...... WCARS Asheville Hamfest, Haywood Cty. Fairgrnds, ASHEVILLE, NC
31-Aug. 1 ...... Florida State ARRL Conv. - 20th Annual Hamfest, JACKSONVILLE, FL

AUGUST 1993

1 ...... Charlotte ARC - 1st Annual Queen City Hamfest/ComputerFair, CHARLOTTE, NC
1 ...... 43rd Annual Winchester Hamfest, BERRYVILLE, VA
7 ...... Tri-State ARA Hamfest/Computer Show, HUNTINGTON, WV
7-8 ...... 5th Annual High Point RC Hamfest, HIGH POINT, NC
14-15 ...... ARRL Nat'l Convention, Hamfest, HUNTSVILLE, AL
14-15* ...... ARK-LA-TEX Hamfest, SHREVEPORT, LA
21* ...... Hamfest, SPRUCE PINE, NC

21-22* ...... Hamfest, MOBILE, AL
22* ...... GCARA Hamfest, CINCINNATI, OH
22 ...... St. Charles ARC Hamfest '93', ST. CHARLES, MO
28 ...... Confederate Signal Corps Hamfest, MADISON, GA
29* ...... Short Mt. Rep Club Hamfest, CEDARS OF LEBANON, TN

SEPTEMBER 1993

4-5 ...... 36th Annual Hamfest, SHELBY, NC
11* ...... Statesboro ARS Hamfest, STATESBORO, GA
11-12* ...... Hamfest, MELBOURNE, FL
12 ...... Foundation AR Hamfest, GAITHERSBURG, MD
12* ...... Lanierland ARC Hamfest, GAINSVILLE, GA
18-19* ...... Hamfest & Computer Show, MOBILE, AL
25 ...... Danville/South Boston 2nd Annual Hamfest, DANVILLE, VA
25* ...... Hamfest, ANNISTON, AL
25* ...... TARA, Hamfest, HUNTINGTON, WV
25-26 ...... Hamfest, LOUISVILLE, KY
26* ...... Hamfest, CLEVELAND, OH

OCTOBER 1993

2* ...... Lanierland ARC Hamfest, GAINESVILLE, GA
2* ...... Hamfest, ROME, GA
2 ...... Sumner Cty ARA Hamfest, GALLATIN, TN
2 ...... 42nd Annual Hamfest & Computer Fair, ROCK HILL, SC
2-3 (Note New Date) ...... Hamfest/Computer Show, VIRGINIA BEACH, VA
2-3* ...... Miss. Coast ARA 17th Annual Ham/Swapfest, BILOXI, MS
9* ...... 40th Annual Hamfest/Computer Show, AUGUSTA, GA
9-10 ...... "Memfest '93" - Delta Division ARRL Conv./Hamfest, MEMPHIS, TN
9-10* ...... 13th Ham Com-Vention, HOUSTON, TX
10* ...... Hamfest, MAYSVILLE, NC
10 ...... 17th Annual CARA Hamfest, HOWARD CTY, MD
16* ...... Hamfest, TUSCALOOSA, AL
16* ...... Tri-Cities Hamfest, GRAY, TN
17* ...... Hamfest, SANFORD, NC
23-24 ...... Hamfest, CHATTANOOGA, TN
23-24* ...... Palm Beach RA Hamfest, W. PALM BEACH, FL
24* ...... Mason-Dixon Hamfest, WESTMINSTER, MD
24* ...... Hamfest, SUMTER, SC
30* ...... Swapfest '93, FOREST CITY/RUTHERFORDTON, NC

NOVEMBER 1993

6-7* ...... Ham Radio/Comp. Expo '93, LAWRENCEVILLE, GA
6-7* ...... Hamfest, FT. LAUDERDALE, FL
7* ...... Hamfest, CONCORD, NC
13 ...... Hamfest & Computer Expo, MYRTLE BEACH, SC
13* ...... TVARN Hamfest, COOKVILLE, TN
13 ...... Twin City Hams Hamfest, WEST MONROE, LA
13-14 ...... Indiana State ARRL Conv, Hamfest, FT. WAYNE, IN
14 ...... 16th Annual Hamfest, MONTGOMERY, AL
20-21* ...... Suncoast Conv. '93 TAMPA, FL
21 ...... 5th Annual JARSFEST, BENSON, NC
27-28* ...... Hamfest, GREENSBORO, NC

DECEMBER, 1993

4-5* ...... Wiregrass ARC Hamfest, DOTHAN, AL
5* ...... HolidayFest '93, LARGO, MD

Please note: The ***Repeater Journal*** maintains Southeastern show dates on our Database. Unconfirmed shows are published quarterly from February and each issue until the quarter before the show date-then deleted. If the show is confirmed, we will publish each quarterly issue up to and including show date, free of charge. Hamfest dates marked with an asterisk(*) are NOT confirmed and are based on information on record from the previous year's date, with no guarantee of accuracy. Hamfest sponsors are urged to get their correct show dates to the ***Repeater Journal*** Editor as soon as possible, to take full advantage of being accurately listed in more ***Repeater Journal*** issues. We acknowledge assistance in confirming dates from *AutoCall, TSRAC AR News Bulletin, The Magnolia Report,* our ARRL Directors, and the response of many clubs and individuals sponsoring hamfests this year.

Have Fun! Attend the Local Hamfest.

Digital on Two Meter FM Simplex

(Continued from Page 1)

totally ignorant of packet, believed those people and assigned digital frequencies, and let things lie.

It was not until years later, when digital got jammed that SERA was asked to "do something." By then it was too late.

I still think the best thing for digital coordination is the setting up of coordinating bodies within the service, run by people who are on packet, who operate packet, and who know packet inside-out. Who could do a better job of making some sense out of coordinating? There are several groups formed for this purpose, and more groups coming along. For them to succeed, they are going to have to get the backing of everyone involved in digital operation.

They are going to have to make some unpopular rules, but it is important to set the groundrules for everyone to follow - to prevent continued problems.

Let's not say SERA is not concerned and has no interest in digital. This is not true. The SERA Board stands ready to assist whenever possible, short of actually trying to do the coordination themselves. Many of our Directors and Vice-Directors are into digital, but many aren't. SERA must take care of 8 states, equally, fairly and do what it does best - coordinate repeaters.

If my editorial did nothing else, at least digital people are talking - this is an important first step.

Meanwhile, the Repeater Journal will continue to give space to responsible digital groups to help get the word out. We will continue to write and publish stories of interest to digital operators.

So let's not waste energy yelling at the editor - let's get started and support those who want to get packet coordinated. There are several organizations wanting to do just that. Let them know you support them. Join with them and become strong and you will succeed - then you won't have to yell at SERA to do the coordination for you - I doubt they could do the job you could anyway!

-Wayne C. Williams, K4MOB, Editor

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And The Walls Came Tumbling Down!!!

The Roanoke (VA) "Mayfest 93" was again scheduled to be held in the Lancerlot Arena at Vinton, but things had to change when the place fell down.

According to the Roanoke Times & World News, newspaper, the building collapsed Sunday Morning, March 15th, reportedly due to a tremendous load of snow on the vast flat roof.

The roof over the hockey rink, and about 75 percent of the building collapsed, this in turn caused most of the walls to cave in. Fortunately no one was in the building when it caved in.

Consequently, a letter from Danny Pendleton to the Repeater Journal reported that the Mayfest would move to the Salem (VA) Civic Center, and held on May 23rd.

Pendleton said the Civic Center was a super facility, and they were fortunate to find such a fine place at this late date. He said there is plenty of space both indoor and outdoor, with drive-in unloading available.

Danny, president of RVARC said Mayfest '93 is a go!!

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P2AT	2mtr ht 2 watt wide receive
P3AT	220mhz ht 2 watts
2SRA	2mtr HT 50-905mhz receive
2GAT	2 meter HT 7 watts
2SAT	2 meter HT S series UT-50
229H	2 meter 50 watt mobile
38A	220 mhz 25 watt mobile
2330A NEW	2mtr-45/220mhz-35 watts
3230H	2mtr/70cm 45/35 watts
2410H	2mtr/70cm 45/35 watts
275H	2mtr all mode 100watts
725	HF 100watt tranceiver
728	HF 100watt tranceiver
729	HF 100watt w/6meter
735	HF tranceiver 100 watts
737 NEW	HF xcvr 100 w/auto tuner/pbt
751A	HF tranceiver 100 watts
765	HF tranceiver tuner/ps
AH-2A	auto tuner for 735/751
AH-3	auto tuner for 725/728/729
AT-150	auto tuner 725/735/751
AT-160 NEW	auto tuner 728/729
AT-500	auto tuner 500 watts
BC-72A	rapid charger W2A, 2SAT
BC-80	rapid charger "P"&"S"series
BP-3	250mah 8.4vdc battery
BP-7	425mah 13.2vdc battery
BP-8	800mah 8.4vdc battery
BP-83	600mah 7.2vdc battery
BP-84	1000mah 7.2vdc battery
BP-85	340mah 12vdc battery
PS-35	int power supply 751/970H
PS-55	20 amp ext ps 725-751A
R-1	.1-1300mhz am/fm/wfm
R-71A	100khz-30 mhz receiver
R-72	30khz-30 mhz receiver
R-100	.1-1856 mhz receiver
R-7000	25-2000 mhz receiver
R-7100	25-2000 mhz receiver
RP-1520	2 meter repeater 25watts
SM-6	desk mic 8 pin
SM-8	desk mic 8 pin up/dn
SP-3	base station ext speaker
SP-12	slim speaker w/visor clip
SP-20	external speaker w/filters

ICOM Authorized Sales and Service

AT-300	160-10 ext auto tuner 850
AT-50	remote auto tuner for TS-50
AT-850	160-10 int auto tuner 850
BC-10	compact desk chgr TH-77
BC-11	rapid charger TH-26/75/77
BC-15A	rapid chgr PB-13 / 14/17/18
DSP-10	DSP unit for plain TS-950S
DSP-100	ext dig signal proc TS-850
HMC-2	boom mic/headset vox ht
MC-50A	deluxe mic w/amp 4pin
MC-60A	deluxe mic w/amp 8pin
MC-80	desk top microphone 8 pin
MC-85	multifunction desk mic 8pin
PB-1	12vdc 800mah 5watt 225
PB-6	7.2vdc 600mah TH-26/77
PB-7	7.2vdc 1100mah TH-26/77
PB-8	12vdc 600mah TH-25/26/77
PB-12	12v 500mah 5watt TH-225
PB-13	7.2vdc 700mah std TH-28/78
PB-14	12vdc 300mah TH-27/28/78
PB-17	12vdc 700mah TH-28/78
PC-1A	phone patch
PS-52	hvy dty pwr supply TS-850
PS-53	hvy duty (22.5a) ps TS-450
R-5000	100khz-30mhz gen cov rcvr
SMC-32	compact spkr microphone
SMC-33	rmt ctl spkr/mic TH-27/77
SP-23	external speaker TS-450
SP-31	external speaker TS-850
SW-2100	swr/pwr mtr 1.8-30mhz 2kw
TH-28AT	2 meter ht 2.5w NEW
TH-78A	2 meter/70cm ht NEW
TH-225A	2 mtr ht 5 watt rx 141-163
TM-241A	2 meter 50 watt dtmf mic
TM-732A	2 meter/440mhz tranceiver
TM-742A	2 meter/440mhz tranceiver
UT-28S	28mhz 50w rx 24-36mhz
UT-50S	50mhz 50w rx 46-57mhz
UT-220S	220mhz 25 w rx 215-230
TS-140S	hf 100w tranceiver 31 mem
TS-450S	160-10m 100w wo/ tuner
TS-450S/AT	160-10m,int w/auto tuner
TS-50S	160-10m 100w small mobile
TS-690S	as TS-450S w/6m @ 50w
TS-790A	144/440/ 1200 optional
TS-850S	160-10m wo auto tuner
TS-850S/AT	160-10m internal auto tuner
TS-950SDx	160-10M 150watts NEW

KENWOOD Authorized Sales and Service

FT-1000	HF 200 watt tuner/ps
FT-1000D	HF 200 watt tuner/ps
FT-990	HF 100 watt tuner/ps
FT-890	HF 100 watt no tuner
FT-890AT	HF 100 watt w/tuner
FT-767GX	HF 100 watt tuner/ps
767-2M	2 meter unit for FT-767
767-6M	6 meter unit for FT-767
FT-747GX	HF 100 watt tranceiver
FC-757AT	auto antenna tuner
FP-800	std power supply(20A)
FP-757HD	heavy duty ps speaker
FT-736R	2meter/70cm all mode
736-6M	6 meter unit for FT-736
736-220	220 unit for FT-736
FT-5100	2mtr/70cm 50/35watts
FT-5200	2mtr/70cm 50/35watts
FT-212RH	2 meter 45 watts
FT-2400H	2 mtr alpha-num 50w
FT-290R/II	2 mtr all mode 25 watt
FT-690R/II	6 mtr all mode 10 watt
FT-790R/II	70cm all mode 25 watt
FT-411E	2mtr HT w/FNB-17
FT-415	2mtr HT w/FNB-25
FT-470	2mtr/70cm HT dual rx
FT-530 NEW	2mtr/70cm HT dual rx
FNB-12S	600mah 12v Ni-Cad
FNB-14	1000mah 7.2v battery
FNB-17	600mah 7.2v battery
FM-747	FM for FT-747
MD-1C8	desk mic 8 pin
MH-1B8	hand mic 8 pin
MH-12A2B	speaker mic large size
MH-18A2B	speaker mic small size
NC-15	quick charger 727/209
NC-29	quick charger 411/470
NC-37	1 hr quick chgr 411/470
NC-42	1 hr quick chgr 415/530
PA-6	mobile adapter 411/470
SP-5	external speaker w/filter
SP-6	external speaker FT-990
SP-767	speaker w/audio filters
YH-2	vox headset for ht
YSK-1L	separation kit FT-5200
G-250	light duty rotator 4 sq feet
G-400RC	light/med duty 11 sq feet
G-800S	heavy duty rotor 20sq feet
G-5400B	az-ele med duty 16sq feet

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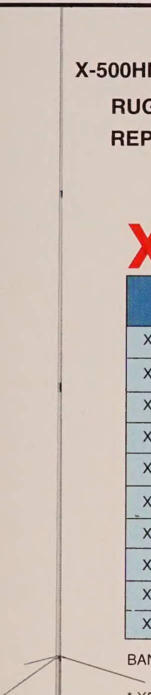
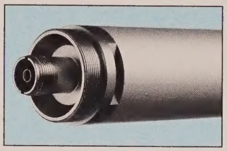
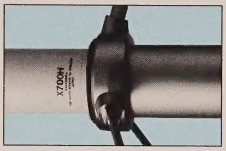
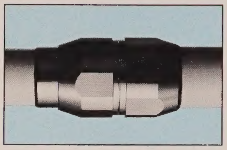

X510

X-500HNA

RUGGEDIZED BASE/
REPEATER ANTENNA


COAX CONNECTION
AT BASE END

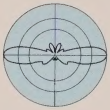

HEAVY DUTY BASE/
RADIAL ASSEMBLY

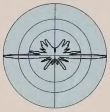

STRONG JOINT COUPLINGS

X series

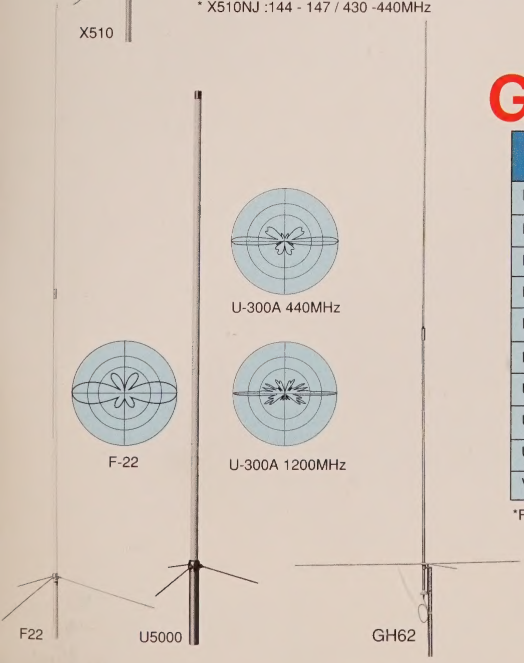
MODEL	BAND(MHz)	GAIN(dBd.)	WATTS	CONN.	HT. Ft.	RATED WIND/ MPH
X-50A	144/440	4.5/7.2	200	UHF	5.6	135
X-200A	144/440	6.0/8.0	200	UHF	8.3	112
X-300A	144/440	6.5/9.0	200	UHF	10.2	112
X-510NA	144/440	8.3/11.7	200	N	17.2	90
X-510MA	144/440	8.3/11.7	200	UHF	17.0	90
X-500HNA	144/440	8.3/11.7	200	N	17.8	90+
X-700HA	144/440	9.3/13.0	200	UHF	24.0	90
X-2200A	144/222	6.0/7.8	150	UHF	11.5	112
X-3200A	144/222/440	6.0/7.8/8:0	100/200	N	10.5	112
X-6000A	144/440/1240	6.5/9.0/10.0	100/100/60	N	10.5	112

BAND: 144=144 - 148MHz. 222=222 - 225MHz. 420=420 - 430MHz.
430=430 - 440MHz. 440=440 - 450MHz. 1240=1240 - 1300MHz.
* X510NJ :144 - 147 / 430 -440MHz


147MHz


445MHz

RADIATION PATTERNS FOR
X-500HNA/X-500MA/X-510NA



GH/F/U & V series

MODEL	BAND(MHz)	GAIN(dBd.)	WATTS	CON N.	HT. Ft.	RATED WIND/ MPH
DP-GH62	50	6.0	200	UHF	21.0	78
F-22A	144	6.7	200	UHF	10.5	112
F-23A	144	7.8	200	UHF	15.0	90
F-142A	222	5.5	200	UHF	6.0	110
F-718A*	440	11.5	250	N	15.0	110
F-1230A	1240	13.5	100	N	10.5	90
U-200A	440/1240	8.3/11.7	100	N	5.9	135
U-300A	440/1240	8.6/13.2	100	N	8.3	110
U-5000A	144/440/1240	4.5/8.3/11.7	100	N	5.9	135
V-2000A	50/144/440	2.1/6.2/8.4	150	UHF	8.3	110

*F-718A:440 - 450MHz, F-718J:430 - 440MHz, F-718L:420 - 430MHz

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If the battery is depleted to less than 5 volts, Alinco's Patented Super Low Battery Consumption Function is automatically activated. You can continue to operate the radio all the way down to 3.5 volts. This feature is effective with dry cell batteries only.

This unit has built in DSQ for paging, CTCSS encode and decode standard, various scanning functions, 3 power level selections for each band, bell function, and an illuminated keypad.

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Specifications and features are subject to change without notice or obligation.